



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

### Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

### About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

909,395













GC  
30  
.M4  
C79



*Mr. F. Maury.*

UJ 17

A LIFE

83915

OF

MATTHEW FONTAINE MAURY,

U. S. N. AND C. S. N.

AUTHOR OF 'PHYSICAL GEOGRAPHY OF THE SEA  
AND ITS METEOROLOGY.'

COMPILED BY HIS DAUGHTER,

Mrs. DIANA FONTAINE (MAURY) CORBIN.

LONDON:

SAMPSON LOW, MARSTON, SEARLE, & RIVINGTON,  
LIMITED,

St. Dunstan's House,  
FETTER LANE, FLEET STREET, E.C.

1888.

[All rights reserved.]

LONDON :  
PRINTED BY WILLIAM CLOWES AND SONS, LIMITED,  
STAMFORD STREET AND CHARING CROSS.

GC  
30  
.M4  
C79

TO  
ANN HERNDON MAURY,

THE LOVING WIFE AND TENDER MOTHER,

THIS VOLUME

Is Affectionately Inscribed.

---

"The heart of her husband doth safely trust in her."  
"Her children also shall rise up and call her blessed."





## P R E F A C E.

---

My object in the preparation of this biography is to establish the claim of its subject to a place among the greatest benefactors of his race ; and to demonstrate, especially to the youth of his beloved country, how a man may be both great and good, mighty in mind and pure in heart. I have endeavoured fitly to show how he persisted in the path of duty even when it led to poverty and exile ; how he threw into any work he undertook his whole heart ; and how, after a life of exceptional fidelity to earthly obligation, as a Christian philosopher he met and triumphed over death.

Much matter of value to such a memoir perished during the war, though more remained than I have as yet been able satisfactorily to use. From a mass of letters and other documents collected during several years by my sister, Mrs. James R. Werth, this volume has been mainly made up ; but the limits to which I felt obliged to confine myself have excluded not a little I wished it to embrace.

I desire gratefully to acknowledge the assistance of my cousin, Gen. Dabney H. Maury, who has furnished several graceful sketches included in the work; and of another kinsman, Col. Wm. W. Blackford, who has supplied help of a similar nature.

My sincere thanks are also due to Professor L. M. Blackford, of the Episcopal High School, near Alexandria, and his talented wife, for their criticisms, alterations, and additions to this work.

## ERRATA.

---

- Page 23, line 21, *for* "April 16th, 1835," *read* "April 16th, 1833."
- " 48, line 2 from foot, *for* "Naval Observatory national," *read* "National Observatory national."
- " 50, line 22, *for* "and, having sent," *read* "and I have sent."
- " 51, line 6, *for* "apple-crust promise," *read* "pie-crust promise."
- " 53, line 4 of heading to Chapter, *for* "1600 miles," *read* "16,000 miles."
- " 58, line 4 of footnote, *for* "J. M. Clity," *read* "J. M. Clitz."
- " 70, line 20, *for* "MR. C. DOBBIN," *read* "MR. J. C. DOBBIN."
- " 81, line 14, *for* "I now have," *read* "now have."
- " 98, lines 8 and 7 from foot, *for* "was commissioned," *read* "was commanded."
- " 99, line 3, *for* "handed in," *read* "hauled in;" and line 5, *for* "Minor Brooke," *read* "Mercer Brooke."
- " 105, line 11, *for* "protectors of lines," *read* "projectors of lines."
- " 111, line 23, *for* "Messrs. Hallory," *read* "Messrs. Mallory."
- " 120, lines 4 and 5, *for* "during the Mexican War," *read* "when war was threatened with Mexico."
- " 125, line 8, *for* "Hon. ISAAC TONCEY," *read* "Hon. ISAAC TOUCEY."
- " 129, footnote, *for* "Franklin Symond series," *read* "Franklin Symon series."
- " 139, footnote, *for* "Chester R. Arthur," *read* "Chester A. Arthur."
- " 166, line 2, *for* "April 12th, 1858," *read* "Sept. 12th, 1858."
- " 173, line 25, *for* "Mr. Malory," *read* "Mr. Mallory."
- " 175, last line, *for* "Nov. 30th, 1860," *read* "Oct. 20th, 1860."
- " 210, line 6 from foot, *for* "(Mr. Millory)," *read* "(Mr. Mallory)."
- " 213, line 3, *for* "got over," *read* "get over."
- " 229, line 7 from foot, *for* "the Havanna," *read* "Havanna."
- " 231, line 20, *for* "manner of closing it," *read* "manner of doing it."
- " 243, line 11, *for* "my cup will be run over," *read* "my cup will run over;" and line 31, *for* "how children," *read* "our children."
- " 277, lines 6 and 5 from foot, *for* "Griffin in Georgia, Norfolk, and Richmond, Nashville," *read* "Griffin, Georgia, Nashville, Richmond and Norfolk."
- " 283, line 22, *for* "countries. Looking," *read* "countries, looking;" and line 24, *for* "forecasts, he," *read* "forecasts. He."
- " 293, line 2 from foot, *for* "R. SCHLIEDON," *read* "R. SCHLIEDEN."
- " 317, line 14, *for* "J. L. Morye," *read* "J. L. Marye."
- " 318, line 23, *for* "Messrs. Progue," *read* "Messrs. Poague."
- " 322, line 15, *for* "Hon. ISAAC TONCEY," *read* "Hon. ISAAC TOUCEY."
- " 325, line 27, *for* "M. T. MAURY," *read* "M. F. MAURY."



A LIFE  
OF  
MATTHEW FONTAINE MAURY,  
U.S.N. AND C.S.N.

---

CHAPTER I.

of Matthew Fontaine Maury—Virginian Planters—Huguenots in America—The Rev. James Maury—His School and Scholars—Thomas Maury and the Great North-West—Richard Maury and Diana Maury—Birth of Matthew Fontaine Maury—Emigration to Tennessee—Life of society in Tennessee—Occupations and amusements of Maury and his brothers—Religious training—School life.

Subject of the present biography was one whose life deserves to be studied and held in reverence, not only by the great American nation which produced him, but by the whole civilised world; for the best part of his life was devoted to the performance of services which conferred honor on the seafaring classes of all countries, while the results of which he first gave birth have since borne fruit, and are to be useful to the whole human race. In Maury we find two characteristics, each valuable in itself, but which invariably produce great results when they are united. He was endowed with extraordinary powers of observation and unflagging industry in working out the details. But he also possessed a vivid imagination, and the dry bones of his new science were endowed with interest by the magic touch of his descriptive pen.

It was Maury who created the science of the physical geography of the sea, and gave that impetus to its study which, in other hands, continues to produce results alike of practical and speculative importance. The higher qualities of the illustrious hydrographer, his self-denying zeal, his single-minded patriotism, his private virtues, will appear in the course of the narrative.

It is desirable that the student of Maury's life should know something of the stock from which he was derived. Matthew Fontaine Maury was descended from a Huguenot family on the father's side, while his maternal ancestor received a grant of land in Virginia from King Charles II. Dudas Minor, in whose favour this grant was made in 1665, was an English gentleman who became the ancestor of the family of Minor in Virginia; branches of which have since moved into Louisiana, Missouri, Kentucky, and other Southern States. The Virginian planters formed a colonial aristocracy with practical exemption from taxation, great command of labour, and almost a monopoly in the production of tobacco. Some of these planters possessed estates of such extent that they amounted to principalities. Lord Fairfax owned all the land between the waters of the Potomac and the Rappahannock. Twenty-six of the finest counties of Virginia were the property of a single nobleman but little over a century ago, whose descendants of to-day do not own an acre of that vast inheritance. Many of the Virginian estates were granted by Queen Anne, and some are still held under deeds from her. She was a favourite in Virginia, was good Queen Anne, and her name was bestowed upon a whole system of rivers.\* In the revolutionary war the Virginian planters displayed a patriotic munificence which sufficiently proved their wealth. On one occasion

\* The North Anna, South Anna, Rivanna, Fluvianna, and Rapid Ann, perpetuate her memory.

Governor Nelson bought 1000 horses for the service of his State; on another he subscribed 200,000 dollars. Mann Page, afterwards governor, fed Washington's army for a week from the supplies of his own plantations.

These Virginians had become a proud and happy race. It is to them we owe that scheme of civil liberty which has blessed the American people, and is to-day extending its happy influences over the world. Inheriting ample fortunes, they were educated in the best schools of the old country, whence they returned to their estates, and passed their lives in contemplating the great possibilities awaiting the new world, and in devising the means by which the capabilities of their adopted country could be developed. Living like patriarchs, served by the willing hands of kindly slaves, freed from all monetary cares, with minds stored with the precedents of history, and knowing no short cuts to knowledge, these men thought out and finally proclaimed that plan of self-government which is to-day the admiration and desire of all the peoples of the earth. Thus George Mason of Gunston composed that "Bill of Rights of Virginia," on which Jefferson afterwards based the Declaration of Independence of the United States.

The Church of England was the only church of the colony. Its edifices, built of English bricks, still stand amidst the graves of old Virginia. Many of them are empty and silent now, serving only as monuments of the dead generations of a noble race. Others have been repaired and modernised by the iconoclasts of these times, and still resound with the grand old ritual of the Church.

Into this Virginian community the Huguenots came, bringing with them the simple service of their creed, the influence of which is still felt in the Low Church observances of their adopted country. These Huguenots, after the Revocation of the Edict of Nantes, became a persecuted



community. Some abjured their religion, for the penalties of nonconformity were cruel; but many thousands of braver spirits, who spurned the offers and defied the threats of Louvois, left France for ever and braved exile and poverty for their faith. They brought with them their names, their courage, and their resolve to worship God according to their consciences. In Virginia they could have no grants of land, for all was already occupied. But they had absolute freedom to think, to work, and to worship God in their own way, amidst a people who welcomed and loved them for their fidelity to a common faith.

Amongst these exiles the families of Fontaine and Maury, who had borne a prominent part in the resistance offered by the Huguenots of France to the *dragonnades* of Louvois, arrived in Virginia in 1714. Identified in a common cause and a common misfortune, they were connected by marriage before leaving France, and became still more closely affiliated in Virginia. In 1722 the Rev. James Fontaine wrote his autobiography, when he was sixty-four years of age, beginning the record of his family with the birth of his ancestor, Jean de la Fontaine, who was born in the year 1500. This worthy resided in the province of Maine, near the borders of Normandy. He was a staunch supporter of the Protestant Church, and occupied an elevated position at Court. But, having become a convert in about 1535, he was hated on account of his zeal for the pure worship of God, and it was deemed expedient to get rid of so prominent a heretic as soon as possible. Charles IX. was then in his minority, and Catherine de Medici held almost unlimited power. Accordingly a band of ruffians was despatched from the city of Le Mans—in the year 1563—to attack his house at night. He and his wife were foully murdered. “Oh, my children,” exclaims the pious biographer, “let us never forget that the blood of martyrs flows in our veins, and may

God, of His infinite mercy, grant that the remembrance of it may enliven our faith, so that we prove not unworthy scions of so noble a stock! God has promised to bestow special blessings upon the seed of the righteous. I have been young and now am old, yet have I never seen the righteous forsaken, nor His seed begging their bread. And we can generally see His providential care guarding the children of those whose blood has been shed in His service." The three young sons of these Christian martyrs were providentially saved, and lived to rear a numerous progeny in the fear of God and the faith of their murdered parents.

This narrative was written in French by the Rev. James Fontaine for the use and edification of his children, some years after he was driven from France by the persecutions following the Revocation of the Edict of Nantes. It was found, 150 years afterwards, at Rock Castle in Hanover County, Virginia, the residence of Mr. James Fontaine, and was translated from the French and published under the title of 'Memoirs of a Huguenot Family.' The editor was Miss Ann Maury, great-granddaughter of Mary Ann Fontaine (the only daughter of the Rev. James Fontaine, the writer of the Memoirs), and of Matthew Maury, a Huguenot gentleman. The subject of this biography was also a great-grandchild of Matthew Maury and Mary Ann Fontaine.

Richard Maury, father of the subject of this biography, was the sixth son of the Rev. James Maury, who was son of Matthew Maury and Mary Ann Fontaine. The Rev. James Maury was an episcopal clergyman and instructor of youth in Walker parish, Albemarle County, Virginia; and he numbered among his pupils three boys who afterwards became Presidents of the United States, and five signers of the Declaration of Independence.

He was a quiet thinker—a serene old man, who gave the

week to contemplative thought and to his school, and Sunday to the service of the sanctuary. In 1756 he was already dazzled by the rising glory of the new country. He was intensely interested in the Great North-West. The Missouri river was a myth at that time: Cox had ascended the Mississippi to the Falls of St. Anthony, and reported the existence of such a stream, but all beyond was shrouded in mystery. "But see," said the aged clergyman, pointing with trembling finger and eager eye to the map of the North American Continent—"see, there must be a large river in that direction: mountains are there, and beyond them there must be a stream to correspond with the vast river on this side of the chain." And by a process of reasoning based on physical geography, he pointed out to his pupils (Thomas Jefferson among them) the existence and line of the river as accurately as Le Verrier did the place of Neptune in the firmament, and predicted that a great highway to the West would some day be opened in this direction.

Thomas Jefferson became interested in the grand thought. Amid the excitement and splendours of the Court of France he cherished the idea of that hypothetical river, its advantages to the United States, the establishment of trading-posts and kindred plans. He urged its exploration upon Ledyard, the celebrated African explorer. Ledyard consented to undertake it, but was prevented owing to subsequent misfortunes.\* Though foiled thus in his first effort, Jefferson still clung to his favourite project, and at last the time came for its fulfilment. Elected to the Presidency of the United States, he planned the expedition of Lewis and Clarke,

\* Ledyard had been a corporal of marines in Captain Cook's third voyage. He undertook a journey across Siberia, but was arrested, sent back under a guard, and turned adrift at the Polish frontier. He was afterwards employed by Sir Joseph Banks, and the African Association, to explore the interior of that continent; but he died at Cairo in 1788.

secured the consent of Congress, and despatched them on their mission of discovery.

In 1790 Richard Maury, son of the Rev. James Maury, married Diana, daughter of Major John Minor, of Topping Castle in Caroline County, Virginia, descended from the settler who had received a grant of land in the reign of Charles II. There were nine children of this marriage; and thus the blood of Protestant England was commingled with that of Huguenot France in the veins of this Virginian family. After their marriage, Richard and Diana Maury first settled in Spottsylvania County, about ten miles west of Fredericksburg. There, on January 24th, 1806, their fourth son, Matthew Fontaine, was born, and was named after his two paternal great-grandfathers. When little Matthew was in his fifth year, his father emigrated to Tennessee with his young family. Their worldly goods were transported in large waggons. Little Matthew, when tired of walking and cramped from riding, was frequently carried on the back of his sister Matilda.

The Maury family established themselves near Franklin, a village eighteen miles north of Nashville. Here young Matthew assisted his father and brothers in the labours of the farm, while his mother and sisters spun, wove, knitted, and fashioned the garments they wore. In short, the family lived the lives of early settlers in what was then a new country.

Wyoming is not wilder to-day than Tennessee was eighty years ago. There were no steamboats then; no railroads, no turnpikes, and no stage-coaches nor stage-roads in all the State. Bridle-paths and rough farm-roads alone enabled the scattered settlers to meet each other. School-houses were few and distant; they, as well as the meeting-houses and homes, were mostly built of logs hewn from the surrounding forests. But few of the public buildings were of brick or

stone, and only men of wealth and enterprise solaced their self-respect, and recalled the memories of their Virginian homes, in residences of boards or brick.

The planter's life in that day was self-sustaining. The women, by an occasional visit to the village, purchased their ribbons and finery. These visits were few and brief: they broke the routine of the home life to the women, as hunting did to the men, and were usually made on horseback.

In the planters' homes there was plenty of poultry and beef, mutton, and Virginia hams, cured by immemorial recipes, beet biscuit, light bread, butter-cakes, buck-wheats, tea, and coffee. There was whiskey, also, to comfort and cheer the wayfarer, and in Tennessee "the latch-string was always out," and has ever been so, even until now.

The day of obedient parents had not then dawned upon the young folks, and in the Maury household there was an unconscious repressive sway. Good and gentle were the parents, but the children became silent in their presence. Matthew's father was very exact in the religious training of his family, now numbering five sons and four daughters, viz., John Minor, Mary, Walker, Matilda, Betsy, Richard Launcelot, Matthew Fontaine, Catherine, and Charles.

He would assemble them night and morning to read the Psalter for the day, verse and verse about; and in this way, so familiar did this barefooted boy become with the Psalms of David, that in after life he could cite a quotation, and give chapter and verse, as if he had the Bible open before him.

Surrounded by all these pure and simple influences, amidst the solitude and silence of the primeval forests, young Maury passed his youth. The cotton-field found him farm-work, and a racoon or bear hunt, with the negroes and hounds brought from Virginia, made up his field-sports. These, and earnest attention to all the opportunities of learning at school, prepared him for the great work of his life.

"It was about this time," he says, "that my first ambition to become a mathematician was excited by an old cobbler, Neal by name, who lived not far from my father's house, and who used to send the shoes home to his customers with the soles all scratched over with little x's and y's."

After obtaining such elementary instruction as the "old field" schools of that period and region afforded, young Maury entered Harpeth Academy,\* subsequently under the charge of Rev. J. H. Otey (afterwards Bishop of Tennessee), assisted by William C. Hasbrouck, who subsequently became a distinguished lawyer of New York.

The quick active mind, and studious habits of the youth soon attracted the notice and secured the regard of his instructors; and so long as the good bishop and the eminent barrister lived, there existed between both and their former pupil the warmest friendship.

\* When in his twelfth year he had fallen from a high tree one day, a height of forty-five feet, and was taken up apparently lifeless. It was found upon examination that he had bitten his tongue almost off, and had injured his back so much that his father thought he would never be fit for work on the farm again. He therefore determined to yield to the lad's earnest wish for more schooling, and permitted him to attend Harpeth Academy.

## CHAPTER II.

Notice of the Career of Maury's eldest brother—His Life in the Navy—He is left on the Marquesas Islands for two years—He is taken on board the 'Essex' by Commodore Porter—Capture of the 'Essex' at Valparaiso—At the Battle of Lake Champlain—Dies at Sea—Matthew receives a Midshipman's Warrant—His Journey to take up his appointment—Adventures and entertainment by relations—Meets his future wife—Her parentage—Cruise on board the 'Brandywine'—Cruise in the 'Vincennes'—Visits the Marquesas—Passes his Examination—Buys a little seal for his sweetheart.

JOHN MINOR MAURY, Matthew's eldest brother, entered the Navy of the United States as midshipman when thirteen years old, and became one of the most distinguished young officers of his time. His whole professional career was one of active service and romantic adventure.

Just before the last war between the United States and England, John Maury procured a furlough, and went as first officer of a merchant ship, which had been chartered by Captain William Lewis of the United States Navy, who commanded her. They sailed on a trading voyage to China. Arriving at the Island of Nukahiva, one of the Marquesas group, Captain Lewis left Maury and six men there to procure sandal-wood and other articles of trade, for which the ship would touch on her return from China. The war with England broke out. English ships blockaded the American ships in the Chinese ports, and no relief came to Maury and his men for two years. It had, meantime, gone hard with them.

There were two tribes on that island hostile to each other, a volcanic ridge dividing them. The king of the tribe with whom the Americans made their home was friendly and true

to them; but frequent incursions were made over the ridge, which was the barrier of his dominion, by the savages beyond it, and one by one the white men were slain, until Maury and a man named Baker alone remained alive.

They adopted every precaution against surprise, and the friendly king gave them notice of coming danger when he could. With the handiness of sailor-men, they found four cocoa-nut trees growing together, and in their tops made their home, not larger than a frigate's maintop, yet sufficient for their resting-place by day or night, and safe from discovery. A rope ladder was the means of ascent and descent, for this curious residence.

One bright morning, two years since their eyes had seen such a sight, a large square-rigged ship stood into the anchorage, and soon to their joy she displayed the American flag. Maury and his mate Baker came down from their perch, took a canoe, and pulled for the ship.\* Their costume was as scant as that of the naked savages, who also sought to board this man-of-war, and the whole party were ordered by the sentry to keep off.

Maury returned to his nest in the cocoa-nut tree. Very soon, however, a launch from the frigate was sent ashore, and a group of officers came within hail, amongst whom Maury recognised an old shipmate, Lieutenant McKnight. At his hail the party looked up, and were astonished to see two white men, arrayed like Adam before his fall, descending from the tree-tops.

They were warmly greeted, taken on board the United States frigate 'Essex,' Captain David Porter commanding, were enrolled on the ship's books, and rated and equipped according to their rank.

Porter assembled his recent prizes in this anchorage, and refitted and watered his ship; he then pursued that famous

\* See Porter's 'Journal of the Cruise of the "Essex."'



cruise which swept the English commerce from the seas over which the 'Essex' sailed. Amongst his captures was a very fast sailer: he equipped and armed her as his consort, and named her the 'Essex Jr.' Lieutenant Downes was appointed her commander, with John Maury as his first-lieutenant.

Not long after leaving the Marquesas, they put into Valparaiso, where the English frigates 'Phoebe' and the 'Cherub,' under the command of Captain Hilliard, fell in with them. Captain Hilliard had orders to capture the 'Essex' at all hazards. Porter, always ready for fight, cleared his ships for action, and stood out to sea to gain the "marine league" required by international law in respect to neutral ports.

The 'Essex Jr.' got well away to sea. The 'Essex,' while rounding the headland, was struck by a squall, her fore top-mast was carried away, and while thus crippled and in the harbour she was set upon by the British frigates and captured, after the most glorious defence ever made by a ship of the United States.

Farragut, then a boy of eight or nine years, dear to Porter as a son, was with him in the 'Essex' in this fearful fight.

The 'Essex Jr.' made her way to the United States, where Maury was ordered to join the 'Epervier,' Captain William Lewis commanding. Fortunately, the 'Epervier' sailed a day before Maury reached Norfolk. Just before sailing, her captain, Lewis, and his lieutenant, Neal, were married to two sisters (the Misses Whittle). The ship was never heard of again, and the ladies were widows (and childless) till they died a few years ago.

Having escaped the fatal chance of the 'Epervier,' Maury received orders to proceed to Lake Champlain, in time to be with McDonough in his complete victory over the British flotilla, which was captured or sunk. Thence, a few days

later, he wrote to a friend in Fredericksburg, Virginia :—" We have won a glorious victory. I hope the first fruits of it will be to confirm the wavering allegiance of New York and Vermont to the Union. They have been threatening to secede unless peace is made with England on any terms."

Soon after the close of our war with England, the pirates of the West Indies had become a terror to all who sailed those seas. Captain Porter, then the most energetic and successful of our sailors, was ordered to fit out a squadron for their destruction. He was authorised to select his officers for a service so dangerous. His first choice was Maury to be flag-captain of the fleet. This officer, like the adjutant-general of the army, gave orders for all the movements.

The service was active and severe; the combats were desperate; no quarter was asked or given. The pirates were all destroyed or broken up and scattered.

As a mark of special approbation of his services, Captain John Minor Maury was sent by Commodore Porter to bear to the United States Government his report of the complete success of his operations. He sailed in the store-ship 'Decoy,' but died of yellow fever in June 1824, just outside the Capes of Norfolk, and was buried at sea, at the age of thirty-one. He had been first-lieutenant of a frigate; at twenty-six he was the flag-captain of the fleet, and was considered by Tatnall Buchanan and other compeers to have been the smartest sailor in the American navy.

After his return from the glorious victory on Lake Champlain, he married his first cousin (the daughter of his uncle, Fontaine Maury) in Fredericksburg, Virginia, and by her had two sons, William Lewis, who died at the age of twenty of heart-disease, and Dabney Herndon Maury, who afterwards became a major-general in the Confederate Army, served on many a hard-fought field in the South and West, was finally placed in charge of Mobile, and was particularly

distinguished in the defence of that place. He is now United States Minister to Colombia, and to him we owe the foregoing interesting narrative of his father's career.

The sad news of Captain John Maury's burial at sea was brought to Fredericksburg by a special messenger on horseback from Norfolk. It was conveyed to his wife by Dabney Herndon,\* the life-long friend of both, as she sat with her two little boys awaiting the arrival of her husband. Mr. Herndon took the widow and her sons to his home, where they lived as honoured members of his family until his death.

This act of friendship bore a rich harvest of love and affection for the orphaned children of Dabney Herndon, to whom Captain Maury's widow was ever after a mother.

In 1825, the Hon. Sam Houston, then member of Congress for Tennessee, obtained for Matthew Fontaine Maury a midshipman's warrant in the United States Navy. But Maury's father did not approve of the midshipman's warrant and the perils of the sea for another son, and, while he did not positively forbid the boy's acceptance of it, he refused to give him one cent towards defraying the expenses of the journey East, and even denied him a parting blessing. Nothing daunted, the lad borrowed a grey mare, named Fanny, from a kind neighbour, and with only thirty dollars in his pocket (paid to him by Mr. Hasbrouck for assisting in the instruction of the younger pupils of Harpeth Academy), he bade farewell to home and parents, and set out with a bold heart and the scant experience of nineteen years to seek his fortune. Years afterwards he said:—"The bitterest pang I felt on leaving home was parting with my brother Dick, two years my senior. We two had hitherto been inseparable; we slept together, studied out of the same book, and shared every joy and every sorrow. In our talks

\* This gentleman's eldest daughter married the subject of this biography ten years afterwards.

and plans for the future, we were always to live together, and each promised to name his eldest son after the other."

In due course of time this was done, and Matthew, having a home of his own, and Richard being dead, the latter's young son, Matthew, came to live with this loving uncle, who thenceforward provided for and educated him, as one of his own children, until he was old enough to "paddle his own canoe."

In Albemarle County Maury first came amongst his Virginian kin, and often told his children of the hospitality he received in the home of his relations, near where the University of Virginia now stands. His arrival was the occasion of an especial entertainment, and when the ice-cream was handed him first as the honoured guest by the black-servant, he astonished that negro, and tried the good manners of the company, by transferring a teaspoonful of the unknown sauce to his own plate, and sending on the rest.

Maury was more than a fortnight on the road,\* which was in those days a very bad one, before he reached the home of Mr. Edward Herndon (who had married his aunt), to whom he sold the mare, and immediately transmitted the money to the owner in Tennessee.

While at his Uncle Herndon's house, he met for the first time the little cousin who was his future wife, Ann Herndon, a maiden of some twelve or thirteen summers. She was the eldest daughter of Dabney Herndon (cashier of the Farmers' Bank, of Fredericksburg, and one of the most prominent

\* On the road into Virginia, he fell in with two merchants, on their way to purchase goods in Baltimore. They both conceived a great liking for the lad, and upon their arrival at Bristol, they each took him aside separately, and offered to let him have what money he wanted from their purses. This kind offer he gratefully declined, though when he reached his relations in Virginia he had only 50 cents left in his pocket. The names of these two friends were Echols and Read.

citizens of that place). Her mother was Elizabeth Hull, of Spottsylvania Co. Nine years afterwards, Maury married Miss Herndon (in 1834) from this same house.

In the year 1825, the Government had not yet established a naval academy, and the young cadets commenced at once the active duties of their profession. The narrow quarters and crowded steerage, as well as the other discomforts of a man-of-war, were, as can easily be imagined, little conducive to study.

But it soon became evident to the companions of his own grade, as well as to his superiors in rank, that young Maury had resolved to master the theory and practice of his profession, and was steadily pursuing that object, regardless of difficulties and obstacles. Active and observant, he merited and obtained a reputation for strict attention to the various details of duty, and consequently was often selected for special service.

It is related by some of his companions of that period how he would chalk diagrams in spherical trigonometry on the round shot in the quarter-deck racks, to enable himself to master problems, while pacing to and fro, passing and repassing the shot-racks on his watch, thus availing himself of every moment of quiet, and acquiring and storing away for future use, scraps of valuable knowledge during hours that other young men of his age carelessly threw away. With no other text-book than an old Spanish work on navigation, he applied himself resolutely, with the aid of a dictionary, to the task of acquiring a new language, and at the same time such nautical information as the book might afford.

During the first year of his service, he visited the coast of England in the frigate 'Brandywine,' which then conveyed to France the Marquis de la Fayette, after his visit to the United States in 1825. The gallant Marquis frequently

noticed the studious little middy, and had many a kind talk with him.

At this time his pay as a midshipman was only nineteen dollars a month, half of which he sent regularly to one of his sisters.

After a cruise of some months in British waters, and in the Mediterranean, the 'Brandywine' returned to New York in 1826, and Maury was transferred to the sloop-of-war 'Vincennes,' then on a cruise round the world.

While in the 'Vincennes,' he became a great favourite with the captain, who used frequently to invite him to dine in the cabin. On one such occasion, when the captain had taken a glass or so too much, he insisted that Maury should drink more than the moderate quantity he allowed himself and which he never exceeded. He firmly and politely declined; but when his superior officer insisted, and, rising from his seat, approached, glass in hand, to push him yet further, he dashed the glass to the floor, and, turning on his heel, left the cabin.

During this cruise, the ship touched at Nukahiva, the island on which his brother John had passed two years, about twelve years before. The old king who had befriended him was still alive, and recognized the younger brother by his name and likeness. He made great show of affectionate greeting, and offered to adopt him as his son and heir.

The change to the 'Vincennes' was a fortunate one for the young student, who found his accommodation in the smaller vessel much more favourable for study than in the noisy and crowded steerage of the frigate. When not occupied with his regular duties, or such social intercourse and amusement as courtesy demands among companions on ship-board, he applied himself resolutely to his books, and made such progress, that, at the conclusion of the voyage, he was

not only ready to stand his examination, but had prepared (and published soon after) a set of 'Lunar Tables.'

The 'Vincennes' having been paid off, Midshipman Maury was at once offered the position of master on another vessel, but he declined the appointment, and availed himself of this opportunity to stand his examinations. He passed twenty-seventh in a class of forty! \*

The following letter was written to his old instructor at Harpeth Academy (afterwards Bishop Otey of Tennessee), while he was serving on board the U. S. S. 'Vincennes':—

MY DEAR SIR,

Callao, Port of Lima, 1827.

I had the pleasure, on my arrival at this place from Guayaquil, of finding your agreeable epistle of Feb. 17th, which is the latest date I have from any part of the United States. I do assure you that the reception of a letter from one of my old acquaintances affords me great pleasure, and particularly one from my old schoolmaster. I am highly flattered with the account you give me of my brother Charles's progress at school. I think that he will show to better advantage as a soldier than as a sailor. I have therefore made arrangements to make him a soldier;† and should our application fail, any assistance which your influence can render him will be gratefully appreciated by me.

My cruising has been very interesting since I joined

\* That a youth of such promise should have passed his examination so low on the list, is but another of the many instances of the kind on record in the history of distinguished men. It may be said, however, that at that period, the scope of such examinations was but faintly defined, and the questions propounded were such as happened to come into the heads of the examining officers. Entering the service at an early age and with but slender opportunities for academic studies afterwards, these sturdy old tars were not likely to question closely on subjects upon which Maury was far better posted than themselves. They attached, perhaps, greater value to details of technical seamanship than to the new problems of their profession, which were then finding birth in the brain of the young man before them.

† He procured a commission in the army for him; but Charles, having set his heart upon the navy, positively refused to accept it, and became a carpenter, at which trade he still works.

this ship, and particularly for the last eight or ten weeks. Owing to the unsettled state of affairs in Guayaquil, we were compelled to stay there, as long as affairs wore a doubtful aspect, in order to protect our commerce against any outrages that might have been committed. On the 10th of last month we were alarmed by the cry of "*Viva la patria!*" "*Viva Guayaquil!*" and on going on shore to find from whence these exclamations came, we found the whole city in arms, and drawn out in order of battle, one party headed by the brother of the other's leader. They proceeded to banish all firm friends to the *Libertador*. Matters remained in this state for about eighteen hours; when, after a little bloodshed, one party declared in favour of the *Libertador*, and permitted the other, called the rebels, to leave the country: they have since joined the Peruvians. A wise piece of policy, indeed, for it is expected that the two nations will have a difference, not far from open hostilities, so soon as Bolivar shall quell all disturbances in Colombia. He is now on his way from Bogota to Guayaquil. The conjectures concerning what course he will take are many, and widely different from each other; but the most probable one is, that unless Peru will make proper concessions, he will adopt measures to unite Peru and Colombia under the Government of the latter. We took the Colombian Minister to Peru from Lima to Guayaquil, where we were compelled to leave him, not that the Peruvians had any objection to the man himself, but to the Colombian Minister. The *Libertador* is very unpopular in Lima, though, should he come to Peru, I should not be surprised to hear a universal acclamation of "*Viva el Libertador!*" such is the fickle disposition of the natives of South America.

Your next please direct to the care of the Secretary of the Navy, by which means I shall always be sure of receiving it sooner than by any other route. Remember me to all my old acquaintances; and believe me to be always yours, &c.,

To JAS. H. OTEY, Esq.,  
Franklin, Tennessee.

M. F. MAURY, U. S. Navy.



In 1831, just before sailing for the Pacific again, Maury became engaged to his cousin and sweetheart, and he then purchased and gave her a little seal, only to be used in writing to him, bearing for inscription the simple word, "Mizpah" ("The Lord watch between thee and me when we are absent one from the other").

Forty years after, when an exile, homeless, and separated from his family, he wrote on the fly-leaf of his Bible, while at sea:—"To my wife. Dost remember Genesis, 31st chap., 49th verse?" and on another leaf—"See 2nd Samuel, 22nd chap., 36th verse: 'Thy gentleness hath made me great, my Nannie.'"

## CHAPTER III.

Appointed Master of the 'Falmouth' on the Pacific Station—Melancholy anecdote—Literary studies under great difficulties—First study of Winds and Currents—Paper on the low barometer off Cape Horn—First-lieutenant of the 'Dolphin'—Return home in 1834—Marriage—Publication of his work on navigation—Birth of his eldest daughter—Appointment to survey southern harbours—Visit to his parents in Tennessee—Fall from a stage-coach—Fracture of his leg—Long illness—Death of his parents—Application for employment.

IN 1831 Maury was appointed master of the sloop-of-war 'Falmouth,' which had been ordered to the Pacific Station. In after years he used to warn his children against injustice to their companions in thought or deed, by telling them the story of Johns, a young midshipman who was in the 'Falmouth' when he joined her for her four years' cruise.

Young Johns, when going ashore at Norfolk, had been entrusted by a comrade, whom we will call B., with a case containing two bottles of very precious attar of roses for his sisters. He shared his room at the hotel in Norfolk that night with another midddy, who shall be called A. A. was to leave very early in the morning to visit some relations, having leave of absence for some months. He accordingly rose early and took his departure, without waking Johns, but first, only for a joke, he poured out the attar and filled the bottles with water. Johns awoke in due time and took the case, which he had never opened, to the sisters of B., afterwards joining the 'Falmouth' for her cruise in the Pacific. The sisters, as soon as they found the bottles were filled with

water, wrote to their brother to complain of the dishonesty of Johns, "who must," said they, "have stolen and sold the attar." Their brother immediately adopted their conclusion, and, after telling the story to the whole mess, demanded that Johns should be treated as a thief and "sent to coventry," being no fit associate for young gentlemen. In vain did the poor young man tell his story; no one believed him but Maury, who did not think the evidence sufficient to convict, and who therefore refused to treat him with scorn and contempt, as all the rest did, but stood by him, and, as he himself often said, was his only comfort in that long cruise. Johns died of a broken heart, and was buried at Callao, protesting his innocence to the last, which was fully established in the minds of all by the remorse of A. when he heard the result of his cruel practical joke.

In the 'Falmouth' Maury had a cabin to himself, and in addition to his own small store of books he had the use of a fine collection belonging to a richer messmate (William Irving, brother to the author of the 'Sketch-book'). But he was never a great reader. He was often heard to say that it was not until he had been put repeatedly to the blush because of his ignorance of the standard literature of the day, and had wondered at the evident delight afforded to some of his companions on reading or quoting a beautiful or striking passage, that he resolutely set himself to work to read the English classics, and to try to enjoy what gave so much pleasure to the most cultivated of his associates. His was eminently an original mind, and he delighted to spend hours in meditation, working out his own great ideas. But he had the Bible and Shakespeare at his fingers' ends, and his many writings abound in quotations from both.

It was during this voyage in the 'Falmouth' to Rio de Janeiro, on his way to the Pacific, that he conceived the idea of the celebrated Wind and Current Charts, which have

since accomplished so much for the commerce of the world. This was the first occasion in which he accepted the responsibility of sailing-master, and he was naturally anxious to make a quick voyage.

Before leaving New York he had searched in every direction for reliable information as to the winds and currents to be encountered, and the best path for his vessel to follow. He soon found that little was known on the subject. Here was a deplorable want which the man of genius resolved he would one day supply. It was on this voyage also that he observed and began to study the curious phenomenon of the "low barometer" off Cape Horn, and it was upon this subject that he wrote his first scientific paper for publication, which appeared in the American 'Journal of Science.' But the labours of his pen did not end here, for it was on this cruise also that he began to prepare for the press a work on navigation, the materials for which he had been gathering together in his mind for several years.

While the ship lay at Callao, he wrote the following affectionate letter to his brother Dick in Tennessee :—

DEAR DICK, U. S. S. 'Falmouth,' Callao, April 16th, 1835.

I owe you much for your kind letter of Oct. last, which came to hand last night. I am writing on my knee for want of a table, so do not grumble at the illegibility of the writing. Your letters are always very charming to me: they give me the best and fullest accounts of all that is going on, only you have never told me of your third increase of family, though it is so common for you and your wife to multiply I do not wonder that you should have forgotten it. Four years married, and three children already! Why, that is as many as I want altogether. . . . Old Mr. Spotswood, the poorest man I know, has some fifteen or twenty children. He says he values each one at £7000, and his wife at £12,000! I hope you will realize at that rate off each one of yours. I am getting frightened, seeing you doing these things at

such a round rate; however, *I* may have none. In that case we will call yours *ours*. I cannot say when I shall be married; that depends upon my promotion, and God knows whether I am to look for that this year, or the next, or the next. I am, and have been for the last year, doing the duties and receiving the pay of a lieutenant. I am sorry to hear you have had such ill-luck with your crops. I hope you will make up this year for all lost time, and be able to place yourself square in the world. But can't you farmers make more than three hundred dollars per year? That seems monstrous little. How much will it cost me to live on shore? I have given A. K. (the 4th auditor) directions to pay to you the sum of three hundred dollars—a claim which I have had standing with the department for some years; reading your letter reminded me of it. The claim is a just one; I have ordered him to send you the amount. This little sum I send you to speculate with; if you make anything from it, we will share the net profits; if you lose it, the loss is mine, and we will say nothing about it. I suppose even ten or fifteen dollars off it, a year, would be some little help to you? If you do not get more than that from your investment, appropriate the whole profits, my good fellow, to your own purposes. You need not be scrupulous about it, for it is lying idle in the department, and would continue there doing nothing until I should call for it after I get to the U. S. . . . .

When I was last in the U. S., I thought if I could get employment as a surveyor, or anything of that sort, by a State, I would try a hand at it and let "Uncle Sam off"; but I believe I have too many notions, and that after all "Uncle Sam" will have the selling of my bones to the doctors.

I like what you say of Charles. I hope he will make a useful man of business; I wish he was not so unsociable as he appeared to be when I saw him last. Say something affectionate and encouraging to him from me.

From the continuance of K.'s silence, I suppose he must be miffed at something I may have said to him from Georgetown. . . . I do not care how little I have done to injure his feelings, or how innocently; be pleased to make any

apologies that are becoming. Make advances on my part and meet him more than half way. I hope, though, that I may be mistaken about his feeling hurt at anything I've done or said.

Your brother,  
MAT.

Having been transferred from the 'Falmouth' to the schooner 'Dolphin,' he performed the duty of first-lieutenant in that vessel until he joined the frigate 'Potomac,' in which he returned to the United States in 1834.

The ship was paid off at Boston, and the young officer returned to Fredericksburg, Virginia, and married his cousin, Miss Ann Herndon, to whom he had been engaged for several years.

His fee to the clergyman who married them, the Rev. Dr. Maguire, was the last ten dollars he possessed in the world. Not long after his marriage he went on to Philadelphia to make arrangements with Mr. Biddle, a prominent publisher of that place, to bring out his "first-born," as he used to call it—his work on navigation. So great was his poverty while there that he lived on cheese and crackers, which he would eat at odd moments in his little garret chamber.

It was considered a bold step on the part of an officer of no higher rank than that of a passed midshipman to publish a work on navigation; but the book, like its author, had the ring of true metal, and made its way in spite of all obstacles. It was favourably noticed by the highest nautical authorities in England, and it became the text-book of the United States Navy.

At about this time his eldest child, Elizabeth Herndon, was born.

A month after his work on navigation was published, he applied for sea-service again, and was attached to the South Sea Exploring Expedition, then fitting out under the

command of Commodore Catesby Jones. He joined the expedition as astronomer and hydrographer, although he was at that time junior lieutenant on the list. On receiving the appointment, he went to Philadelphia to study and prepare himself for this responsible position. In a little plank observatory in Rittenhouse Square he soon became an adept in the use of the telescope, transit instrument, and theodolite. In 1834 Captain Wilkes succeeded Commodore Jones in the command of the expedition. He, it was understood, wished to reorganize it, and Maury, with great delicacy, offered to resign. But on the same day he again applied for active service, and was then assigned the duty of making surveys of southern harbours. On leaving home he took with him a tiny shoe from the foot of each of his little daughters (for by this time he had two) to hang up in his cabin and remind him of the pattering feet he loved so tenderly and would miss so sorely.

In the following letter to his brother, written while he was in Philadelphia, he speaks of his plans and aspirations for the future:—

DEAR DICK,

Philadelphia, October 29th, 1835.

Yours of the 10th inst. is before me; for which I thank you most heartily. But first I must tell you how comes it that I am here. I left Fredericksburg ten days ago, and am here for the purpose of hurrying my book through the press. The publishers were to let me have the proof-sheets in Fredericksburg, but they came to me so slowly that I resolved to come on here and use every exertion to bring the book out before Congress meets. Without wishing to excite your expectations, I will let you into the secret of my plans, which I wish you to preserve as a secret, in order that, if I should not succeed in what I undertake, my friends and family may not feel the effects of disappointment. You must bear in mind that this is the first nautical work of science that has ever come from the pen of a naval officer;

and upon its merits I intend to base a claim for promotion. Such a case has no precedent. Therefore you must look upon it as an experiment in which I may, or I may not, be successful. If I succeed, I shall be put over the heads of many who are now above me. You see in this another motive for secrecy, for many of those over whose heads it is likely I would be placed would, if they knew I contemplated such a thing, use every exertion to prevent it. I shall ask to be made a lieutenant of ten years' rank. If this is done (of which I am by no means sanguine), besides the advantage of making me old in rank, it will entitle me (I think) to back pay, as though I had been a lieutenant for these ten years; and this back pay will amount to some \$4,000 or \$5,000. I shall be promoted next March at any rate, and my object is to get the book out and present my claim before that time, which, by being presented before I receive any promotion, will be doubly strong. Hence the haste to have the book out. I wish to impress upon you that I am not sanguine of success, but am resolved to try every honourable means to accomplish the object, and to take the most favourable time for it. The book, I hope, will be out in about six weeks. One hundred pages are printed; there are about 300 more. Negotiations for having 150 of the latter stereotyped (they are tables) are on foot. So much for my book, and my secret plans.

Now, Dick, for your letter and your generosity, which you prove to be what, Dick, I know it is. In my dilemma last Fall I did not apply to you for assistance, not because I thought you would not render it cheerfully (for I have always felt that to do so would be a pleasure to you), but because I thought K. would do it cheerfully also, and with less inconvenience than you could. While I was waiting for his reply, I was relieved by having the greater part of the money, which the department had withheld from me, allowed to me. This placed me beyond the necessity of calling upon my friends for pecuniary aid. I then announced this circumstance to K., and offered to serve him in any way I could, and I assure you I should be very happy to serve him. So, Dick, I beg that you will not suffer yourself to have any



unpleasant feelings about the matter; for I feel that security in your friendship and affection which I have ever felt, which grew up with us from our childhood, and which has been and is a source of unutterable gratification to me. You know that of all of our brothers, we two were more as one in feeling and in disposition; even our boyish fights never interrupted the tide of affection between us. It has never been the custom with us to use words in order to express our feelings for each other, nor shall I break in upon that custom now; but I delight to think of our happy days together when we were young. I do not think that I shall want any money, Dick. I am making the book bear my expenses while I am here, and my pay is appropriated to the use of my family. I shall be here about six weeks, I expect. I have put matters in such a train that I shall know of this to-morrow.

Tell A. R. M. that if I am not in Fredericksburg when he passes through, my wife will be there, who will be much pleased to form his acquaintance, and that I hope he will allow her an opportunity of so doing. How does little Mat come on, and who is he like? Give my love to Sr. Peggy and every one of the children. Tell Charles I hope he is getting rich. He must write to me. I never know where to find him, else he should hear from me. Love to Pa and Ma and Catherine. Tell the latter she must knit me a pair of yarn socks. Good-night, dear Dick, and believe me as ever,

Yours affectionately,  
MAT.

The following is a remarkable letter from a young man of twenty-eight to his elder brother. He writes as if he felt every word, although he did not become a professing Christian himself until 1867, when he joined the Episcopal Church while in London after the war:—

MY DEAR BROTHER, Fredericksburg, November 16th, 1834.

For several days I have been promising myself this pleasure. I am at leisure to-day, and housed in consequence

of the sleet, which fell last night, and the bleak wind which is whistling at the windows. Last Sunday I wrote to our good old mother, and during the week I mailed to her a religious newspaper—which Ann takes—and proposes, after she herself shall have finished it, to send for Ma's entertainment. . . .

Aleck tells me, Dick, that you have joined the Campbellites and become a disciple! . . .

I do not regret to hear that you have turned away from worldly things. . . .

There is another thing, Dick: persons professing to be Christians are very apt to make the conduct of their brother-professors around them a standard for their own conduct towards God. This may, without knowing it, and unless one keep a watchful eye upon his own heart, tend, more or less, to lead us to regard unduly the opinions of the world, and prompt us to do what an untrammelled conscience would condemn. Learn your duties, Dick, from the Bible. There you have them laid down in example, law, and precept. I love to see Christians after the Bible and according to their own consciences, and not according to the opinions of other men. I hope, Dick, whatever persuasion you join, that you will be a Christian according to the Bible as you understand it.

As ever, yours,  
MAT.

After being engaged on surveying work for more than a year, Maury obtained a few weeks' leave to visit his parents in Tennessee, and attend to some business-matters for his father, who was now old and infirm. He also wished to make arrangements for bringing his parents into Virginia to live with him. On his way back to New York he was thrown from the top of a stage-coach, he having given his seat inside to a poor woman who could not stand the exposure of the cold night air. His leg was broken at the knee. It was set by an incompetent surgeon, and he languished for three months at Somerset, Ohio. It was found necessary to

break the limb over again and reset it, and this was done without the aid of opium or chloroform, the use of which in surgical operations was then unknown. In January 1840, he believed himself so far recovered as to be able to resume his journey to New York, where the vessel was still lying to which he was attached. But he had to be driven in a sleigh from Ohio across the Alleghany Mountains in the dead of winter. He was much delayed on the road, and the vessel sailed without him.

The following letters were written just before and after his accident:—

At Home, near Franklin, Tenn.,  
Sept. 27th, 1839.

MY DEAR COUSIN,

In my last I alluded to the possibility of my parents' return with me; but all their plans, and mine too, have been changed, at least for the present.

The Navy Department will not allow me to wait here for the rising of the waters, and I am afraid to venture with the old people and the very rough roads between this and Louisville, Ky. These considerations have induced my father to determine on a visit to my Sister Holland. . . . It is their present intention to spend the winter with her in Mississippi, and in the spring, if Pa thinks himself equal to the undertaking, they will come on to Virginia. . . . My mother, who is quite as untravelled as Aunt Herndon was, thinks she could perform the trip from here to Fredericksburg on horseback! . . . My father's voice, which was always very powerful, is as strong now as it ever was; he frequently exercises it in calling to his hands while at work at the top of its hail; it can be heard distinctly a mile off; under favourable circumstances it has been heard two miles. . . .

Besides, being at Mrs. Holland's, he will be within a day's ride (35 miles) of Memphis on the Mississippi, whence he can choose his own time for the journey.

Since writing the above, I have received a letter from Nannie informing me of the arrival of a letter in a liver-

coloured envelope, requiring my immediate presence in New York, so I shall have the pleasure of seeing you sooner than I expected.

Sincerely,  
M. F. M.

The following letters describe his accident, his sufferings and surroundings, at Somerset, Ohio :—

*From M. F. MAURY to ANN MAURY.*

Somerset, Ohio, October 23rd, 1839.

MY DEAR COUSIN,

I shall not be with you according to intentions expressed in my last. I write, toes up, to inform you of the accident which detains me. With twelve others I was upset in a stage here last Friday, about 1 A.M. I was the thirteenth, and had my right knee-joint transversely dislocated and the thigh-bone longitudinally fractured, making together a very serious injury, from which a recovery must be slow.

Fortunately I am in the hands of a good physician, and my mind is at ease. According to one of the first physicians of the State, whom I had to examine the leg, treatment, &c., I may consider myself fortunate if I am off my back in three months' time. With this prospect before me, I have written for Nannie and the children. . . .

But for this or some other accident I should now have been in New York. My most affectionate good wishes to your father, and ever, dear cousin, your friend,

M. F. MAURY.\*

In December 1839, Maury had so far recovered from his

\* This letter is written in a changed and trembling hand, and evidently with great effort, as indicated by the abbreviations, not usual with him at that time, and the interlineations, mistakes, etc. The appearance of the ink shows that it was not all written at the same time, or with the same pen.

accident as to be able to leave the place where it occurred. The following was one of his last letters written at Somerset, Ohio:—

*To MISS MAURY, New York.*

Somerset, Ohio, Dec. 25th, 1839.

. . . . I hop out in the porch every day to take an airing and to inure myself to the weather. We have a fine snow for sleighing: I hope it will hold; travelling will be much more easy and much less fatiguing. The night, or a few nights before I left home, I pointed out the evening star to Bettie, and told her when I was gone to look at that and think of me. Not long after they heard of my misfortune the family were looking out upon the evening, and Bettie gazing on the star, her little voice was heard in the tiny prayer, "I pray God to make my papa well." There was a poetry and even a sublimity in this childish fancy, which, at the time and under the circumstances, were very touching. Message after message she sent me, Make haste to get up; go to the window and look at that beautiful star; but never have I been able to see it.

Thinking to keep up the train of poetry in their little minds about that star, I sent word to her and Annie to look at that star and wish for one thing, and whatever they wished for I would bring them. They both wished for cake! So much, you see, for my romance.

\* \* \* \* \*

In May 1841, Maury, having a home at Fredericksburg, in Virginia, sent his nephew, Dabney Maury, to Tennessee to bring his parents to live with him; and they went with the family to Washington in 1842, but both died within a year of the removal. The fracture of his leg had seriously affected Maury's prospects in the Navy, and at one time there was ground for the apprehension that he might be altogether incapacitated from active service. At this period he wrote the following letters to his cousins, Mr. Rutson Maury of New York and Miss Ann Maury, in which he reviews his past career.

Letter to his relative, Mr. Rutson Maury of New York :—

DEAR RUTSON,      Fredericksburg, Virginia, August 31st, 1840.

My *panacea* for *ennui* is the pen. There is no time hardly, when I enjoy more refined pleasures than when, deprived of companions, I dip into the inkstand for friends that are far away. Therefore, I seldom or never feel lonesome. But I account for the fact rather from an accident of education, than from any peculiarity of natural disposition.

When I became old enough to reflect, it was the aim at which all my energies were directed to make myself a useful man. I soon found that occupation, for some useful end or another, was the true secret of happiness. With this idea, I left school, where I had received a very desultory sort of education. I was anxious to enter the Military Academy at West Point. But the bare mention of the wish put my father in a rage. I abandoned the idea, therefore; but secretly set about, through the agency of a friend (at that time a shop-boy, or, as we say in the West, a store-boy), to obtain a warrant in the navy; for my prospects, as I thought, had become exceedingly gloomy.

I had, at school, been called on by the teacher to hear first one class, and then another, until I became a regular amateur assistant. This was being useful, and I was proud of the occupation, though it seriously interfered with my own studies. The teacher, who was a poor young man from New York (he is now a lawyer of property at Newberg), finding that I was to be taken from school to follow the plough, offered, in the fulness of his heart, to send me to one of the northern colleges. He had just drawn \$500 in a lottery, and like Gil Blas with his "ducats," he thought there would be no end to his \$500 prize. And no doubt in my eyes, also, the \$500 seemed, like the old woman's "empty barrel" of meal in the Bible, perfectly inexhaustible. But pride, or unwillingness to lay myself under such obligations, prevented the acceptance of the good Dominie's offer.

In the meantime my appointment in the navy came. I went home, and the first intelligence my parents had of my intentions was this letter of appointment. It disturbed the family very much, and my father expressed his disappro-

bation of my conduct in strong terms. As I had proceeded without consulting him, he determined to leave me to my own resources. I was resolute: I bought a horse, and got the man to trust me until I could remit him the money after selling the horse in Virginia. I set out from home without a cent in my pocket, intending to trust to luck, and, if necessary, stop on the road and work out my bills when I got to town. However (Sunday morning), I found that the faithful Dominie had left \$30 for me. I had not travelled many days, when mine host informed me that thenceforward my Tennessee money "would not go"; and he offered, "as it was me," to give me \$20 for what I had left. I thought him very kind, and accepted his offer. When I got to our cousin Reuben's (at Charlottesville) I had but 50 cents left, which I was exceedingly afraid Reuben would find out. And when I finally reached Fredericksburg the 50 cents was reduced to 25. I sold Fanny (my steed) for what I gave for her, and remitted the money to the man in Tennessee. And though I came without orders, Southard, who was then Secretary of the Navy, allowed me 15 cents a mile from Franklin to Washington City, which fairly put my head above water.

When I went on board ship, I set out to make everything bend to my profession. I was required to study Spanish; and that nothing might be lost, I got a Spanish work in navigation, and studied that.

The information that I wanted I knew not where to seek. The consequence was, that I had to search for grains of knowledge among bushels of chaff. Hence it is that I have studied to so little advantage; but in studying I always kept in view some particular point on which I wanted information, and it is to that I alluded as an "accident of education."

I used to resort to various artifices for study while on watch. If I went below only for a moment or two, and could lay hands upon a dictionary or any book, I would note a sentence, or even a word, that I did not understand, and fix it in my memory to be reflected upon when I went on deck. I used to draw problems in spherical trigonometry with chalk on the shot, and put them in the racks where I could see them as I

walked the deck. That with so much perseverance I should have failed in my prime object, I attribute to the want of books and proper teachers in the navy. Therefore, if the next collection of "Scraps from the Lucky-Bag"\* should appear to you a little *outré*, you will know the cause. I have sent them to Mat to be overhauled by him.

Yours truly,

M. F. M.

To ANN MAURY of New York.

MY DEAR COUSIN,      Fredericksburg, Va., February 15th, 1840.

I have not been long enough at home yet to systematise my time, and therefore have not set about anything in particular. In fact, I have not yet done playing with the children.

Sometimes I think—when I become desperate—that I'll write. Sometimes I have a notion to take to books and be learned; but then such vast fields and pastures and wastes and seas of unexplored knowledge appear on the horizon, my ignorance sickens at the prospect. I am reminded of how little, how very little, I do know; just enough to be sensible of this fact. Then I'll content myself with cultivating a few little patches of knowledge. What shall they be? Shall they be light or heat?—storms or currents?—ship-building or ship-sailing?—steam or projectiles?—hollow shot or gravitation?—gases or fluids?—winds or tides?—or—— And in the wilderness of subjects, the mind is confused, and knows not which to choose; so I play with the children and bend the knee, which, though now more readily bent, does not admit of but very little more flexion than it did when I saw you. I have disrobed the leg of its bandages, and flung away the splints, and taken to going through the motions of walking, by putting "the pet" to the floor every time the crutches are planted a-head for a step. The effects of all this have been to make the size of the "pet" equal that of its fellow, and I am beginning to regain the use of the muscles—all excepting

\* The title of a series of articles on the Navy which made a great impression at the time.



the lifting ones. I have no power to operate through them on the tendon which was torn from the lower part of the knee-pan; so that I cannot prevent the knee from sinking under me. This then, you see, is the seat of the great injury. Though more ungainly, I sometimes think a stiff knee would have been more serviceable than a weak one.

*To the same.*

MY DEAR COUSIN,

March 29th, 1840.

The cheerful tone of your letter to Nannie gave us cause of congratulation. All hands, but the children and I, have gone to church. Betty is with me in the dining-room running round the table for amusement. Little Nannie is upstairs, where she has been stowed away to be cheated into a nap. Judging by the sound of her little voice, she has almost played herself to sleep. I am acting as nurse, you know, to keep Betty from running out. She has just interrupted me to hear her repeat her little hymn you sent her, "Stars that on your wondrous Way." Nannie, too, from hearing Betty recite it, is very *au fait* at it; and so are all the little negroes on the Lot.

I sometimes lament the natural turn of these last for poetry and music. If Nannie attempts a new song, before she can play it, "Stewart," a lad (darkey) of ten or twelve years of age, has caught the air, and pumps water or saws wood to the tune of "Flow gently, Sweet Afton," or whatever else happens to be the favourite air with us all for the time being.

Tell Mat I have applied for service *on crutches*.

Yours,  
M.

Soon after his return to Fredericksburg, it was urged by the *National Intelligencer* (Washington paper) that Maury should be made Secretary of the Navy.\* Other prominent

\* His nomination, by a portion of the press, as a good man to fill the post of Secretary of the Navy, arose from his publication of the series of papers advocating naval reform, entitled "Scraps from the Lucky-Bag."

newspapers caught up the cry, and public sentiment seemed all in favour of this selection. But he steadily declined the honour, and thus speaks of it in the following letter :—

MY DEAR PARENTS,                      Fredericksburg, Va., Jan. 26th, 1841.

I do not think there is much danger of my having a Cabinet appointment inflicted upon me. The newspapers continue to discuss the subject, though, with much earnestness. That I should be thus brought forward and commended is, of course, exceedingly gratifying to me, as I am sure it must be to you also. In these times of party rancour and bitter political strife, high places in the State edifice are far from being desirable to those who value peace of mind.

In another letter to the same, he thus refers to his affliction :—

The leg gains strength slowly. I can walk now with the assistance of a stick only ; but a walk of two or three hundred yards breaks me down. A terrible calamity is this, indeed, to me.\*

For several years subsequent to this, his correspondence is full of sweet allusions to his little children, his family, and surroundings. To his parents he writes :—

The boy Richard Launcelot grows apace. He is a fine little fellow, and I think he is the pet with both his aunts.

Little Betty has just skipped in, and says, "Tell ganpa to come and see us, and the son too, and that's all." She can read understandingly, and is quite proud of it.

Little Nannie (Diana) is only in her "A, B, C's" as yet, under little Betty's tuition. She has a good memory, and can repeat several hymns and verses, standing on the table and accompanying herself with appropriate gestures. She, every night and morning, "Pays to God to bless her dear

\* This event, which, at the time, he considered the greatest calamity of his life, as he thought it put an end to his professional distinction, was but a blessing in disguise. For though for many years his maimed body was considered unfit for active service, his ready mind turned and grasped the scientific part of the profession, and there found a broad field for his labour.

ganma and ganpa." They are both very affectionate children, though very unlike in their dispositions. Betty is devotedly fond of flowers; Diana cares very little for them, but takes much delight in associating with cats, dogs, &c. She is sitting in my lap while I am writing, and says, "Tell ganma to send me some pay toys."

You must not suffer yourselves to be annoyed by W. B. and the land, nor to be at all pinched or straitened for the want of a little money. It will not only be convenient, but a pleasure to me, to let you have what you want and whenever you want it.

Our stove has proved a great comfort and convenience, and we find it a great economy also. I am now writing in the parlour, and though there is no fire in the room, the warmth from the stove in the dining-room makes the air in here as soft and balmy as a spring morning.

With affection, my dear parents,

Your son,

M. F. MAURY.

In 1841 Maury flattered himself that he was able to perform sea duty; but, fearing that the intervention of family and friends might defeat his application, he went from his residence in Fredericksburg to Richmond, and from thence he addressed the following letter to the Secretary of the Navy, Hon. J. E. Badger:—

SIR,

Notwithstanding my crippled condition, I think I shall be able to perform any of the lighter duties at sea which do not call for much bodily exercise, as of flag-lieutenant for instance, to which office in the Pacific Squadron Commodore Jones has signified a desire that I should be appointed. That duty, or any other elsewhere, to which I am able, and with which the department should see fit to entrust me, shall be undertaken with pleasure.

Respectfully, &c.,

M. F. MAURY.

Hearing of this application, Judge John Taloe Lomax, a distinguished ornament of the bench in Virginia, and a warm personal friend of Lieutenant Maury's, addressed a letter to the Secretary of the Navy, remonstrating in strong terms against the propriety of yielding to Lieutenant Maury's application, and enclosing a certificate from the three best physicians of the town, Drs. Wellford, Carmichael, and Brown, who had been attending him since his injury, which testified to his incapacity to stand the exposure and hardships of sea-life at that time. In consequence of these letters the Secretary declined to order him to sea.

He speaks of this in the following letter to Rutson Maury :—

Fredericksburg, Nov. 13th, 1841.

. . . . There is no move as yet seaward. The physicians in town have made quite a man of importance of me. They, I understand, united in a sort of remonstrance against my going to sea, setting forth to the Secretary the unseaworthiness of the leg. As this was done without my knowledge or consent, I do not know what action the Secretary will take upon it.

Yours,  
MAT.

## CHAPTER IV.

Publication of "Scraps from the Lucky-Bag"—Appointment to the charge of the Depôt of Charts and Instruments at Washington—Letters respecting the work at the Observatory.

IN 1839 Maury began the publication of a series of articles on naval reform, and other subjects of general interest, under the title of "Scraps from the Lucky-Bag," and with the *nom de plume* of "Harry Bluff." They first appeared in the *Southern Literary Messenger* of Richmond, and the incognito was preserved for some time; but the essays attracted much attention, and were generally approved by the navy. Amongst other matters, he urged in these papers the adoption of steam as a motive power. Perceiving the change that steamships, rifled guns, and hollow shot would bring about, he proclaimed "a new era in naval warfare, that of big guns and small ships."\* Under the old system, the power of a man-of-war was expressed by the number of her guns, some having as many as 120. He predicted that in future wars few vessels would have more than six. Experience has shown how sound was his judgment.

In the early part of the same year he drew attention to "great-circle sailing,"—as a means of shortening the distance between American and English ports. He also wrote on the subject of "Direct Trade in Southern Bottoms." This question was warmly discussed by the *Richmond Whig* and the *New York World*.

In another scrap for the same paper he advised that "a

\* See *S. L. M.*, October 1839.

navy-yard and forts should be established at Memphis and Pensacola," and wrote:—"Pensacola and some point in Georgia, or on the Eastern Coast of Florida, cannot be too strongly fortified or too well supplied *now* with all the imperishable articles on the lists of outfits for shipping, with implements and instruments of war. They would be to the Gulf of Mexico and the West Indies what Gibraltar is to the Mediterranean and the Levant.

"There our vessels might rendezvous and thence hold the enemy in check. For them our merchant vessels, when pursued, would shape their course, and find safety in the strength of these two points. . . . In our present unprotected state, and without the above-mentioned defences, all the immense wealth which is poured into and out of the Gulf of Mexico, as through a funnel, would be at the mercy of an enemy." In the same paper he advocated the establishment of a naval school for young midshipmen, "that they might there be instructed in the higher duties of their profession," and urged the use of regular text-books. This paper led to the building of forts at Key West and the Tortugas, and to the establishment of a naval school at Annapolis, Maryland, and the use of his (Maury's) 'Navigation' as a text-book there.

In a paper entitled "The Navy and the West," published in the *Southern Literary Messenger*, of January 1843, he insisted upon the advantages which would accrue "from the building of a dock and navy-yard and school of instruction for naval engineers at Memphis, so that they might be ready to understand and control the steam power which was beginning to be adopted as a motive power in the Navy."

The *Memphis Eagle and Enquirer* said of him, on April 9th, 1859:—"If there has been no occasion heretofore to ask the question, it is not out of place now to inquire, To whose exertions are we chiefly indebted for the establishment of the

navy-yard at this place? The answer is, to the labours of Lieutenant M. F. Maury.

"About sixteen years ago he, in a series of masterly and convincing articles, published in the *Southern Literary Messenger*, showed the importance of a navy-yard, to be located in the valley of the Mississippi, and satisfied every reflecting mind that it was due to the interests of the West, considered in all its commercial and political relations.

"These articles attracted great attention. They found their way into the weekly and daily papers, and led to warm and animated discussions upon the merits of the project started by Lieutenant Maury.

"He met all objections triumphantly; but went further, and proved to the satisfaction of the great minds of the country that Memphis was the precise location best suited for the establishment of the proposed navy-yard; nor were his efforts in this cause confined to communications addressed to the intelligence of our countrymen through the public press. The matter was brought before Congress, and was referred by the House of Representatives to the Committee on Naval Affairs. Lieutenant Maury was indefatigable in his labours to put the Committee in possession of every fact and item of information necessary to guide it to a wise conclusion, and actually wrote the Report presented to the House by Dr. Peyton, and which the Nashville papers at the time commended as a masterly production.

"Ought not the debt to be recognized by some appropriate acknowledgment on the part of our city authorities, or of our citizens, not by passing complimentary resolutions—heaven save the mark!—but by some substantial token which may witness our appreciation of his services. What shall it be? In my opinion it had better be the offer of a home, comfortable and well-furnished, in our vicinity, and an invitation to come and spend the balance of his

days within the State of Tennessee—the State of his adoption.

"Perhaps some one else can suggest something better, or more appropriate. I am chiefly anxious that some lasting memorial be preserved of the labours of a man, who by his works has conferred lasting honour upon his whole country, and, upon this city in particular, special benefits.

"I may recur to his labours again, and show that Lieutenant Maury is the author of a measure which has secured, and is now securing by its operation, millions of dollars to the States bordering on the Mississippi."

In June 1843, he advocated the use of blank charts on board public cruisers. This paper was read before the National Institute. Afterwards, in July of the same year, he read before the President, members of the Corps Diplomatique, &c., another much-talked-of paper, entitled "The Gulf Stream and its Causes," and still later a paper on the connection of terrestrial magnetism with the circulation of the atmosphere.

In another "scrap" he urged, for the defence of the great lakes, the establishment of forts, arsenals, and a ship-canal from Illinois River to Lake Michigan, to connect with the Memphis navy-yard (which had by this time become a fixed fact), and transport ships to and fro in time of war:—

"Millions have been expended for the defence of the Atlantic seaboard. A million is due for the protection of Southern harbours and the Gulf States, and if we leave the Lake States exposed, it is like locking fast the doors of an edifice and leaving the windows open . . . . It is other nations which impose upon us the necessity and expense of military preparation; and it is well to remember the sage advice of a wise statesman, who said, 'In time of peace prepare for war.' If all other nations would sink their navies, raze their forts, and disband their armies, we too



might do the same; for we 'arm only for defence, and not for conquest.' . . . How different is the Illinois ship-canal from any of the Atlantic forts! They are works which must be garrisoned and kept in order at heavy annual expense. The former, with one or two outworks, will protect 2000 miles of coast-line in war; and in peace be a source of untold blessing to the East and West, to the North and South, and of solid and substantial benefit and advantage to a vast commerce.

"It will more than maintain itself—the money expended on it in peace or in war will not be idle for a moment, and the work will pay back its first cost every year in princely and magnificent sums. . . . Let this work be completed, and it will prove a dragon's tooth, planted in the West, to bring forth for the defence of the country a harvest of steam-clad warriors, ever brave, always ready. . . . The question of this ship-canal is second only to that of the free navigation of the Mississippi River and the purchase of Louisiana.

"Various elements are at work in our political system to try the strength of the Constitution. Whenever, if ever, a political storm shall burst upon us, this canal will prove a noble anchor to windward . . . Such agents are at work, as tend to foster sectional jealousies. . . . Intolerance and fanaticism are the bane of free institutions—they may be destined some day to try the strength of the Union. Give us, therefore, for antidote, this canal."

His first five "scraps" from "The Lucky-Bag," which were written on naval reform and other subjects of national interest, attracted so much attention, and were so generally approved by the Navy, that (although the author was, as yet, entirely incognito, and great curiosity was expressed as to who he could be) the officers, defraying the expense by subscription, had large numbers of these papers published and circulated.

When it became known that Maury was the author of these remarkable papers, his ability and grasp of mind were universally acknowledged. His position as an authority on naval questions was established, and soon afterwards he was placed in charge of the *Depôt of Charts and Instruments* at Washington, not upon his own application, but on the recommendation of brother-officers. Maury developed this office into the well-known "*National Observatory and Hydrographical Department of the United States.*" He received the appointment in the seventeenth year of his service, and the thirty-sixth year of his age. "No man could have been found in the country," says Senator Bell\* of Tennessee, in a speech before the Senate, "better fitted than Maury for this difficult duty; and he worked with the zeal and energy that were expected of him."

About this time, he writes to his cousin and others describing his work at the Observatory, his life there, and other matters.

*To ANN MAURY.*

U. S. *Depôt of Charts, &c.,*

Washington, August 4th, 1842.

. . . . I came from home a month ago. The additional exercise, which I have been obliged to take here, has proved of the utmost service to the leg. On one or two occasions, I have been on my feet from eight or nine in the morning till eleven at night. The leg strengthens under it all the time. I am on my feet standing or walking most of the day; but, unless I go down the city, I never touch my cane. It stands in the corner looking like a cast-off friend. So far the new duties are admirable.

A Bill has passed the Senate for building a *depôt*, as 'tis called. . . . What part I am to have in it, or what bearing it is to have upon me in my present situation, I am not able even to guess.

\* Senator John H. Bell, who was the Whig candidate for President in 1860, and was defeated by Abraham Lincoln.

- I am keeping bachelor's hall for the present. Miles, the porter, and I can vie with you in economy. His and my expenses for one week, including marketing, board, &c., amounting to exactly forty-eight cents. Moreover, there was generally a midshipman to tea.

*To the same.*

October 15th, 1842.

. . . . Lewis Herndon is now attached to this office. He and his wife (Mit) are messing with me now. . . .

Last week, when in New York, I occupied your room. I counted and recounted your "Little Niggers" \* over the mantelpiece oftener than Gil Blas did his ducats. You know, between morning naps, counting numbers is a regular thing with me. I try to make the mind do something to give it the habit of obedience to the will, whenever the faculties are not sleeping. It kicked terribly though at having to imagine every morning the middle profile in a line with the rest. Then there was one looking back; she *must* be taken down and put in front. Those profile pictures are, to me, the most eloquent exponents of affection and love. It may be association; I suppose it is.

February 16th, 1843.

. . . . We are all in our usual state of health, except perhaps myself. The doctor said I was destroying myself with overmuch head-work, and, in consequence, I have had to hold up somewhat. But it is a hard case that one's brains will not stand the work of one's will.

Certain it is that, after working from nine or ten in the morning till one or two at night, I began to look and feel badly.†

\* Silhouettes in black and white.

† This letter is written with marked illegibility. His caligraphy ever since his leg was broken shows a change for the worse. At this time, excessive work brought on pain in the head, so that, even when sleeping, he would put his hand continually to his head, as if by that pressure to keep the busy brain from working.

A curious prophecy of the phonograph and telephone is contained in the next letter:—

*To ANN MAURY of New York.*

Washington, May 12th, 1844.

. . . . What a pity it is that M. Daguerre, instead of photography, had not invented a process of writing, by merely speaking through a trumpet at a sheet of paper. What a glorious thing it would have been! I could then have hailed out letters to M. in the boldest hand, and at any time. Instead of saying, I wrote you a letter last Monday, the phrase would have been, I spoke you a ream last Tuesday. The world would become a mere scribbling shop—a vast book machine. When out visiting, and you would wish to give the cook an order, you would only have to hail down the pipe and the cook would have a written order at her feet, and then there would be no mistake about the puddings.

What a convenience that would be to housekeepers!

Such a consummation, though, must be left for the generation of such as Davy Jones and little Poll. 'Twould be a curious thing if they were to carry on a courtship in this way.

*To ANN MAURY of New York.*

Observatory, June 23rd, 1844.

. . . . To-morrow is Betty's and Nannie's birthday. They and Goggin (Dick)—indeed their mother, aunts, and all hands—are as full of a trip to the Chain Bridge for a picnic as old King Seid was of his visit to the "Island in the Lake."

They—the three children—are to catch fish for dinner, and Vendovi (the dog) a hare. Lewis Herndon is to go to row them in a boat. Mit (Herndon's wife) is forbidden to go unless she looks happy, for she hates picnics. Mr. Brown has fitted up a fishing-rod for each. The 'bus is to take us up at 10 A.M., and come for us at five or six. We are to carry matches and make a fire, cut boughs and make a bower, and Davy Jones is to take his nap in the mill, or under the bridge, according to circumstances. The greatest

drawback to the most extravagant anticipations of pleasure and enjoyment, is the fear that the day will be rainy or snowy, or something, and the fact that "to-morrow is so *long* a-coming."

The greatest marvel about the whole thing is, that Nannie has become quite enthusiastic about it. . . . If nonsense will sell at all, I am sure you have here three fipsworth of it.

*To the same.*

Observatory, Sept. 13th, 1846.

. . . . I look at the stars and you are brought to mind. Those superb clusters in Perseus which you used to admire in the west are now in the east. Sirius, with his "Dawn of Day" in the telescope, has disappeared, and the glorious Nebulæ of Orion culminate by day; but then there is that exquisite double star in Andromeda, orange and emerald—that, too, is in the east.

. . . . I have quite a large corps of observers, and some very good ones. So closely do they observe, that their observations show the instruments to be in different parts of the building. I am now very much engaged with preparations for publishing our first volume of observations. This keeps me stretched, for as a preliminary thereto most tedious investigations of the forms, figures, imperfections, &c., of the instruments are necessary. . . . A glorious privilege is that of labour. . . . An officer is standing idle while I write this.

In haste, yours,

M.

The *National Intelligencer* says, in speaking of Maury and his work at this time: "The simple dépôt for charts and instruments was transformed into an observatory. Surrounded by such men as Ferguson, Walker, Hubbard, Coffin, Keith, Yarnell, Laurence, Beecher, and other faithful workers, whom he inspired with his own enthusiasm, he made the Naval Observatory national in its importance and fame."

To MRS. WILLIAM MAURY, *Liverpool.*

Observatory, Nov. 14th, 1846.

MY RIGHT TRUSTY AND WELL-BELOVED *Cousin,*

I am sure you cannot *hate* that word. It is a good old word, venerable for its antiquity, lovely in its associations. The dearest friend of my youth was also my cousin, and my first and only love, my charming Nannie, who has blessed and who now cheers and comforts me; she too called me cousin, and lent all the enchantment of "young love's dream" to the word. "Blood is thicker than water," and I do love my worthy cousins.

. . . . I am very much occupied in keeping the stars in order. I have one in custody at present, taken up under the "Vagrant Act"—a mulatto! It is unique, and a perfect little love. . . . I have two pairs of double stars which Lewis Herndon makes 20" or 30" farther apart than the great Bessel represents them to be. These must be looked after; and if they have moved that much, the discovery will be a grand one. I have them in my pocket now though, and I'll keep them till you come, so we may look after them together. Besides, there is the "great refraction circle," which has just come; you must help me to mount that. It is an exquisite piece of machinery; I should like to wear it round my neck, it is so beautiful!

The following letters to his friend, Mr. Blackford, explain Maury's motive in accepting the appointment at Washington.

To WM. BLACKFORD, ESQ., *Lynchburgh, Va.*

DEAR BLACKFORD,

Observatory, January 1st, 1847.

A prosperous and a happy new year to you and yours. You are equal to Brodie Herndon for pleasant letters. . . .

I send you a copy of our observations; not that I expect you, Cousin Mary, or Lucy, to read it through, but for the chance of a silent lesson which your boys may sometimes find in it.

The colleges are warm in their commendation of the volume, and it amuses me that almost every one expresses

surprise that *Navy* officers should be able to do such things. We have beaten Greenwich all hollow, there is no doubt; yet we shall do even better next time. . . .

I have solved a problem that has often blistered my heart, and proved that *Navy* officers are fit for something else than scrubbing decks at sea and tacking ship. You know I did not want the place, and only decided to keep it when I heard it had been promised to a civilian, under the plea that no one in the *Navy* was fit for it. I then went to Mason, pronounced *that* the repetition of a practical libel, and told him he must stand by me. He did so, and though I had never seen an instrument of the kind before, and had no one with me who had, I was determined to ask no advice or instruction from the *savans*, but to let it be out and out a *Navy* work. Under these circumstances you may well imagine the pleasure which I derive from any fresh proof of success.

There is a chance of the Observatory being converted into the "Hydrographical Bureau," with a salary of \$3500. I would be wrong to give up that; but, as I said before, if it were not for my poverty, I should not desire to remain here longer than to satisfy two or three problems, and, having sent for an instrument, to help in solving them. I beg pardon, but one must take an airing on one's hobby now and then.

In haste, your friend,

M. F. MAURY.

*To the same.*

April 20th, 1848.

. . . . The Observatory affairs go on pretty well. They speak of us kindly in Europe, and I think we are making friends in Congress. I am preparing for an expedition during the summer, on the Magnetic Telegraph Routes, for the purpose of determining difference of longitude between the principal cities and the Observatory.

Willy, I suppose, is toting the chain? Tell him to drive a-head, study well, and improve fast; I shall want him to go out and survey the route for that Memphis and California Railroad. . . .

The Boston merchants were so pleased with that Wind and Current Chart,\* that they offered to raise 50,000 dollars to buy a vessel and keep her at my orders—to try new routes. I said nay; and then they petitioned Congress to detail a man-of-war for the purpose, to which “Uncle Sam” gave apple-crust promise. Four vessels that I know of have tried the new route to the equator. The average of the four passages is ten days less than the average by the usual route.

*To the same.*

March 12th, 1849.

. . . . The charts are going a-head bravely. They are quite as much admired on the other side as on this; and they do turn out exceedingly rich. Some new discovery, some new fact or law of nature is constantly starting up before us as we proceed with our investigations.

Lewis Herndon has the Whale Chart in hand; that chart will be of such importance to the whale-men that they might well afford to give us a perpetual log in all their ships. . . .

Betty is going to school, and growing apace. I wish I could give her physic to keep her as a child. The idea of my daughters ever getting married is so unpleasant, that I am sure I shall never like the man who marries one. I hate him now from the bottom of my heart. .

Schools and education disturb me. If I were only a rich man I would devote all my wealth, time, and energies to reforming education. I would build a model college for boys, and another for girls, and be happy as are the angels in the consciousness of doing good. As a general rule, I regard colleges, as at present conducted, as humbugs, and female seminaries as downright cheats; and now that the time has come for educating my own children, I find myself chained down by the vile system, and I am unable to break the fetters, because I am too poor to employ teachers of my own, and so have my children educated in regular ship-shape style. A little music for the girls is all I can get.

\* The one to Rio, the first of the series.



To see how smatteringly they are taught, look at the great majority of middle-aged women of your acquaintance who are educated at these seminaries! . . . .

To a young cousin (Lucy Blackford) he says:—

I hope you have a code of rules for study which are unbending, which you follow up daily with great diligence, and that you do not often take doses of poison from those things called novels! Novel-reading is, to the student, what mint-julips are to the tippler—most delightful and refreshing at the time, but serpents under the flowers in the end. I often deplore the general state of female education in this country.

In 1847–48 Congress failed to make any appropriation for the National Observatory, and in consequence Maury's pay was stopped for a time. He speaks of this incidentally in the following letters to his cousin in New York:—

Observatory, April 10th, 1848.

. . . . No pay yet, and I am very tired of living on such slender means. Better times, I hope, are coming before long; this poverty is a terrible weight upon one's mind and wants.

June 10th, 1848.

. . . . The pay has almost passed the House, and I begin to think of increasing expenditure in the way of education, &c., for the children, and church and social facilities, &c., for Nannie.

My "magnetic longitude" trip has been knocked on the head, for the present at least, by the non-arrival of the instruments from Munich.

August 25th, 1848.

. . . . Congress declared the Superintendent of the "Marine" to mean me, and to mean moreover that the pay should commence from the passage of the Act—thus giving me about \$500 extra!

## CHAPTER V.

History of the Wind and Current Charts—Letter from Captain Pinny of the Bark 'Gertrude'—Great races between four clipper ships, sailing from New York to San Francisco by the Wind and Current Charts—One Ship wins the race of 1600 miles by three hours.—The Senate of the United States proposes to remunerate Maury for his Wind and Current Charts, but never carried out their proposal—Annual savings to the commerce of the world effected by the charts—Abstract Logs—Sailing Directions—'Physical Geography of the Sea'—Maury's rule of conduct in scientific investigations—The Brussels Conference—Honours conferred upon Maury by the governments of foreign countries.

It will be remembered that when Maury took up his first appointment as sailing-master, he observed the want of trustworthy charts to show the winds and currents encountered by mariners. He then resolved, if an opportunity was allowed him, to supply this great desideratum from the old log-books which, since the establishment of the United States Navy, had been stored away in the Hydrographic Department as rubbish.

He now extracted, with much labour, all the valuable information they contained. He also collected data relative to the voyage between the United States and Rio de Janeiro from every reliable source. The first chart of his series and the first sailing directions were at length completed. They were not at first appreciated; but Captain Jackson, commanding the 'H. W. D. C. Wright' of Baltimore, determined to trust the new chart and follow the new track. The experiment was a complete success, for he made the voyage out and back in the time often consumed by the old traders in the outward passage alone. There was now no hesitation about the use of the new charts and sailing directions.

which were furnished as they were issued, to the masters of vessels bound for foreign ports, who were invited to join Maury in collecting data for making other charts and new sailing directions. An active interest was soon excited, and in all parts of the world he had intelligent and zealous assistants.

The following extract is taken from a letter of one of these faithful co-labourers, Captain Phinny, of the American ship 'Gertrude,' written to Lieutenant Maury in January 1855 :—

Having to proceed from this to the Chincha Islands and remain three months, I avail myself of the present opportunity to forward to you abstracts of my two passages over your southern routes, although not required to do so until my return to the U. S. next summer, knowing that you are less amply supplied with abstracts of voyages over these regions than of many other parts of the ocean. Such as it is, I am happy to contribute my mite towards furnishing you with material to work out still farther towards perfection your great and glorious task, not only of pointing out the most speedy route for ships to follow over the ocean, but also teaching us sailors to look about us and recognize the wonderful manifestations of the wisdom and goodness of the great God, by which we are constantly surrounded. For myself I am free to confess that for many years I commanded a ship, and although never insensible of the beauties of nature upon sea and land, I yet feel, that until I took up your work I had been traversing the ocean blindfold; I did not think, I did not know, the amazing combinations of all the works of Him whom you so beautifully term, "the great First Thought."

I feel that, aside from any pecuniary profit to myself from your labours, you have done me good as a man. You have taught me to look above, around, and beneath me, and to recognize God's hand in every element by which I am surrounded. I am grateful, most grateful, for this personal benefit. Your remarks on this subject, so frequently made in your work, cause in me feelings of the greatest admiration,

although my capacity to comprehend your beautiful theories is but limited. I have spoken as I feel, and with sentiments of the greatest respect, I am, &c.

Maury's Sailing Directions contain a particular and graphic account of a great race between four clipper ships from New York to San Francisco, *viâ* Cape Horn, which followed substantially, but with different degrees of fidelity, the Wind and Current Charts, and suffered just so far as they disregarded his directions. The 'Wild Pigeon' sailed October 12, 1852; the 'John Gilpin,' October 29; the 'Flying Fish,' November 1st; the 'Trade Wind,' November 14. Their tracks are all known and laid down from day to day, almost from hour to hour. It is curious to find how they crossed and doubled upon each other—sometimes close together without knowing it, then falling far apart, once or twice coming in sight. At different dates their several chances varied most strangely. 'Flying Fish' made the voyage in 94 days and 4 hours; 'John Gilpin,' 93 days and 20 hours; 'Trade Wind,' 102 days; 'Wild Pigeon,' 118 days. It is a thrilling narrative of perhaps the grandest race ever run.

The *San Francisco Times* says:—"This city is the terminus of one of the most remarkable events on record. Two first-class ships, the 'Governor Morton' and the 'Prima Donna,' sailed together from the port of New York on the 14th of February; they were towed outside Sandy Hook, side by side, so near to each other that conversation was carried on by the two commanders. The racing vessels crossed the equator in the Atlantic Ocean on the same day, though not in the same longitude. They entered the Straits of Le Maire the same day and came out of them the same day; they crossed the equator in the Pacific in the same day and in the same longitude. Both ships arrived within three hours of each other after a race of 16,000 miles! These two facts demonstrate the accuracy that has been attained in the

science of navigation, and also prove the reliance which may be placed upon the Wind and Current Charts of Lieutenant Maury, whose sailing directions both vessels followed."

During the last ten years of his service at the Observatory, the world rang with the fame of Maury's Wind and Current Charts and Sailing Directions. When considered merely with reference to the amount of money saved to the commerce of the world, by their use, their value can scarcely be exaggerated. *Hunt's Merchants' Magazine* of May 1854 says:—"Now let us make a calculation of the annual saving to the commerce of the United States by shortening the voyages 15 days, owing to the use of these charts. The average freight from the United States to Rio Janeiro is 17·7 cents per ton per day; to Australia, 20 cents; to California, 20 cents. The mean of this is a little over 19 cents per ton per day. But to be within the mark, we will take it at 15 cents, and include all the ports of South America, China, and the East Indies. We estimate the tonnage of the United States engaged in trade with these places at 1,000,000 tons per annum. With these data we see that there has been effected a saving for each of those tons of 13 cents a day for a period of 15 days, which will give an aggregate of \$2,250,000 saved per annum. This is on the outward voyage alone; and the tonnage trading with all other parts of the world is also left out of the calculation. Take these into consideration, and also the fact that there is a vast amount of foreign tonnage trading between those places and the United States, and it will be seen that the annual sum saved will swell to an enormous amount."

Several years later this was confirmed at a reunion of distinguished scientific men, held in honour of him in London, where it was stated by Sir John Pakington, the Chairman, "That the practical results of the researches

instituted by this great American philosopher of the seas had been to lessen the expenses of the voyage (by shortening the passage) of a 1000-ton vessel from England to Rio, India, or China, by no less a sum than £250; while on a voyage of a ship of that tonnage to California or Australia and back the saving effected was £1200 or £1300."

When 'The San Francisco,' with hundreds of United States troops on board, foundered in an Atlantic hurricane, and the rumour reached port that she was in need of help, every one looked to Maury as the only man in the country who could tell where to find the drifting wreck. To him the Secretary of the Navy sent for information. He at once set to work and showed how the wind and currents acting upon a helpless wreck would combine to drift her 'just here,' pointing to a spot on the chart, and making a cross-mark with the blue pencil he had in his hand. Just there the relief was sent, and just there the survivors of the wreck were picked up. This was an incidental result of his study of winds and currents."

The value of his system being now fully demonstrated, Maury was authorized by the Government to solicit the co-operation of European powers in the establishment of a general system of meteorological research by sea. Copies of the Charts and Sailing Directions were forwarded without charge to the Government ships of all countries, and should be distributed gratuitously to the masters of merchant vessels, with the understanding that each one so furnished should keep a record in the prescribed form, and at the end of each voyage forward it to Maury at Washington. The form was as follows:—Each navigator was to enter in his abstract-log every day in the year the temperature of air and water, the direction of the wind, and set of the currents, the height of the barometer, &c. He was also to cast overboard at stated periods bottles tightly corked, containing, on a slip of paper,

his latitude and longitude and the day of the month and year. He was to pick up all such bottles found floating, note latitude and longitude of place found, and day of month and year in the abstract-log, and forward all to the Observatory. By this means Maury was furnished with materials for the construction of his Wind and Current Charts, consisting of many millions of observations on the force and direction of the winds, the set of the currents of the sea, and the height of the barometer. In the space of eight years he thus collected a sufficient number of logs to make 200 volumes of these observations, of 2500 days each.

In this heavy work he was materially assisted by the willing hands of many junior officers of the Navy, whom he inspired with his own enthusiasm.\* With their aid the observations were tabulated. They were then discussed by Maury, and yielded, for the guidance of the mariner, the celebrated Wind and Current Charts.

With the assistance of these observations, he also compiled two quarto volumes of Sailing Directions, of which eight editions have been published.

The value of these labours was so fully appreciated by the Government of the United States, that, in January 1855 it was proposed in the Senate that a suitable remuneration should be made to Lieutenant Maury. Mr. Mallory made the following report to the Committee to whom this subject was referred :—

\* Wm. Leigh, Wm. B. Whiting, Wm. B. Benedict, Wm. Flye, Lardner Gibbon, A. C. Jackson, A. A. Sunnes, D. B. Ridgeley, R. Forest, W. K. Gardner, J. M. Matthews, J. C. Dekroft, T. S. Fellebrow, John M. Brooke, J. D. Johnson, B. M. Dove, J. Humphries, J. M. Clity, J. C. Beaumont, E. C. Winder, C. H. Wells, G. P. Welsh, G. Minor, H. M. Harrison, K. H. Wyman, R. Aulick, R. D. Minor, J. J. Guthrie, O. C. Badger, D. A. Forrest, H. R. Davenport, N. H. Van Zandt, W. B. Fitzgerald, J. Young, G. N. Morris. Also Wm. Lewis Herndon, Wm. R. Taylor, Wm. H. Ball, J. J. Henson, C. E. Flemming, Wm. G. Templer, T. B. Wainwright, W. W. Roberts, W. H. Murdaugh, &c.

“(TO ACCOMPANY BILL S. 567).

“The Committee on Naval affairs, to whom was referred the resolution of the Senate to inquire into the value to commerce and navigation of the Wind and Current Charts and Sailing Directions of Lieutenant Maury, and to report on the justice and expediency of making a suitable remuneration therefor, have had the same under consideration, and thereupon report.

“Some ten or twelve years ago, Lieutenant Maury of the United States Navy, on duty at the Observatory, conceived the idea of ascertaining and defining the courses of ocean winds and currents, a knowledge of which he believed would shorten all ocean voyages, and link distant countries more closely together, and he obtained the permission and the aid of the Navy Department to collect the observations of mariners upon every sea. His plan was announced; the Navy was required to co-operate; an appeal was made to American shipmasters, who in all that pertains to their profession are unsurpassed; and in a brief time reports and extracts from ships' logs from every sea whitened by American sails began to accumulate at the Washington Observatory, and the abstracts of these reports—reports which, if made by one observer only, would have occupied more than two millions of days, a longer period than man has been upon the earth—already fill nearly four hundred large manuscript volumes. From the Arctic Seas, and the sunny waters of the Pacific; the tracks of thousands upon thousands of voyages between American ports and those of Europe, Asia, and Africa; from the east and the west, the north and the south, came the daily observations of ocean's wayfarers; and these, in the hands of Mr. Maury, constituted the raw material from which the charts and sailing directions were to be constructed. Thus, without any expense beyond



a copy of the work sent to every recording shipmaster, has been organized upon the sea a corps of systematic observers more extensive than has ever been engaged upon the investigation of any scientific subject. Every shipmaster engaging in the observations, receives from the Government a copy of Mr. Maury's work, and thus all are interested in it. The observations of each tend to the benefit of all; and each, wherever may have been the locality of his observations, has the benefit of the experience of thousands who have been there, and elsewhere, before him.

"Thus, when the charts shall have been completed, the mariner, whatever may be his position upon the ocean, will be able to inform himself as to what winds and weather the united experience of thousands may teach him to expect; from what quarters he may hope for favourable or apprehend adverse wind and weather.

"The immediate result of Mr. Maury's labours is, that ocean voyages under sail are shortened from ten to twenty per cent.; and if this result be followed out to its legitimate consequences, who can undertake to prescribe a limit to the benefits they confer? Who will undertake to estimate the mere pecuniary saving, to the navigating interests, in the decreased expenditure for outfits, provisioning and manning ships, the decrease in ocean risks, not only to ships and cargoes, but to lives of seamen and passengers, and the enhanced value of merchandise by a more speedy delivery?

"Before the publication of these charts, a voyage from our eastern ports to San Francisco, under canvas, occupied, on an average, one hundred and eighty days; but now the average voyage of vessels using these charts is one hundred and thirty-six days; and in several instances it has been performed in half the time formerly occupied. The vessel's course through the sea has been precisely that which is traced for her upon the chart. The *Melbourne Argus*

(Australia) publishes a list of all the arrivals at that port from Europe and America from December 31st, 1853, to July 7th, 1854, by which it appears that the average passage of all vessels *without* the charts was one hundred and twenty-four days, while the average of those (from the same ports) *using* the charts was ninety-seven days.

"The migratory habits of whales, pursuing from season to season their food through the ocean, have long been known; and the logs of Mr. Maury's corps of observers have enabled him to show, at a glance, upon his Whaling Charts those parts of the ocean where, at any season of the year, whales ('sperm' or 'right') may be found. The observations of one whaler must, necessarily, be limited by a few voyages and localities; but this arrangement of Mr. Maury's enables him to profit by the experience of others.

"The most gratifying evidence as to the value and importance of these charts to the practical navigator continues daily to be received from all parts of the world. They lessen the dangers of navigation, and, by showing at a glance the prevailing winds and currents for each part of the ocean and for every month of the year, they enable the navigator to come and go with despatch; and thus, by shortening passages from port to port, they have brought remote parts of the world, particularly the markets of the northern hemisphere, India, China, and the Pacific shores of America, nearer together by many days' sail.

"The Government of the United States having invited the co-operation of the maritime nations in this great work, a plan of mutual assistance has been adopted, embracing not less than nine-tenths of the shipping of the world; and we may reasonably anticipate the speedy solution of some of the most mysterious problems in the economy of nature from thus reticulating the entire surface of the great deep by systematic and multitudinous observations.

“The following letter from the Secretary of the Navy, and extracts from our own States Papers, will serve to show the light in which Mr. Maury’s labours have been, and are, regarded by our own Government :—

SIR,

Navy Department, January 23rd, 1855.

Your communication of the 20th inst., requesting information as to the benefits which commerce and navigation have derived from Lieutenant Maury’s Wind and Current Charts, has been received.

The information contained in the accompanying extracts from the files of the department upon the subject appears to leave no doubt that they are of very great value, and, in referring to the opinion expressed in the last annual report of the department, I avail myself of the occasion to repeat expressions of my decided conviction that this officer, by his ability and enthusiasm in the cause in which he has been engaged, has not only added to the honour of his country, but saved millions of dollars for his countrymen.

I have the honour to be, &c.,

J. C. DOBBIN.

To HON. S. R. MALLORY,  
United States Senate.

“‘The operations at the National Observatory and Hydrographical Office continue to be conducted in a manner highly satisfactory, and are adding much to the stores of knowledge and the facilities of ocean navigation. By virtue of the authority contained in the Act of Congress, approved March 3rd, 1849, I have recently appointed an agent in the City of London to make sale of the copies of the charts prepared at the Hydrographical Office for the cost of printing them, with the charges of transportation and a reasonable commission, so as to diffuse the information afforded by them to nautical persons generally.’ (Annual Report of the Secretary of the Navy, November 30th, 1850.)\*

“‘The advantages of science in nautical affairs have rarely

\* Hon. Wm. A. Graham.

been more strikingly illustrated than in the fact stated in the report of the Navy Department, that by means of the Wind and Current Charts projected and prepared by Lieutenant Maury, the Superintendent of the Naval Observatory, the passage from the Atlantic to the Pacific ports of our country has been shortened by about forty days.' (Annual Message of President Fillmore, December 2nd, 1851.)

"The Wind and Current Charts planned by Lieutenant Maury, the Superintendent of the Observatory, and prosecuted under his direction with much industry, are being extended to the Pacific and Indian Oceans. This work is viewed with great interest and satisfaction by our seafaring communities, and all those interested in the safe and speedy navigation of the ocean. It has materially shortened the passage along the highway by which our commerce passes into and through the southern hemisphere, bringing the ports of those distant parts of the world some ten days, and some several weeks, nearer to us than before. A letter from the Superintendent of the Observatory, which accompanies this communication, states the important fact, that vessels sailing from the Atlantic to the Pacific ports of the United States, with the instructions afforded by these charts, make the voyage in forty days less, upon the average, than those sailing without them, and that there is reason to hope the time may be still further reduced.' (Annual Report of the Secretary of the Navy, November 29th, 1851.)

"The Naval Observatory continues to pursue its appropriate labours with its usual good results, and is found to contribute the most important facilities to the improvement of navigation. I cannot better commend it to the regard of Congress than by a reference to the letter of Lieutenant Maury, which accompanies this report.' (Annual Report of the Secretary of the Navy, December 4th, 1852.)\*

\* Hon. Jno. P. Kennedy.

“‘The Naval Observatory, under the superintendence of Lieutenant M. F. Maury, is doing much for science and navigation, much for the benefit of mankind and the honour of our country. For a few years past a correspondence has been conducted between the United States and certain other governments on the importance of adopting some plan to secure a more uniform mode of making observations at sea. Ascertaining that various governments designed being represented at Brussels, in pursuance of scientific suggestions with which Lieutenant Maury had been conspicuously connected, I felt it my duty to relieve him temporarily from service at the Observatory, with a view to his visiting Brussels. The result of his labours, in conjunction with other eminent persons, will, I have no doubt, prove vastly beneficial to commerce and navigation.’ (Annual Report of the Secretary of the Navy, December 5th, 1853.)

“‘The achievements quietly and gradually effected by Lieutenant Maury, although not attracting the admiration of the multitude, nor dazzling the beholder with sudden flashes of triumph, have reflected honour upon himself and his country; have brought remote nations in comparative proximity to each other; have promoted commerce by pointing out to the mariner new paths on the great deep where favourable winds and currents lend favourable aid. His Wind and Current Charts and Sailing Directions are saving millions of money, by shortening the voyages of merchant vessels freighted with treasure.

“‘I am officially informed that it was stated, in a paper read before the British Association last year, that it was estimated in India that a set of wind and current charts of the Indian Ocean, like those that have been constructed at this office for the Atlantic Ocean, would produce an annual saving to British commerce, in those seas alone, of not less than \$1,000,000 a year (£250,000), and for British commerce in

all seas of \$10,000,000 a year. This estimate was based on the condition of shortening the voyage only one-tenth (whereas the average length of the passage to all places beyond the equator has been shortened much more); and the estimate was again repeated at the last meeting of the Association in Liverpool. It has also been estimated that the value of these charts to the commerce and navigation of the United States is equivalent, in the saving of time, to several millions a year.' (Annual Report of the Secretary of the Navy, December 4th, 1854.)

"Such are, briefly, the origin, the design, and the utility of the Wind and Currents Charts and Sailing Directions of Lieutenant Maury; and now the question in the Senate's resolution, of the justice and expediency of making some remuneration to him for them, arises.

"Mr. Maury is an officer of the Government, and its agent within the legitimate scope of his authority, and to the Government are due his time and his talents. This work, though originated and executed by him, has been achieved by the authority and with the assistance of the Government. He is the Superintendent of the Astronomical Observatory—is charged with the hydrography of the Navy; and the purchase, safe-keeping, and distribution of the nautical instruments required for the Navy also devolve upon him.

"His rank of Lieutenant entitles him to the pay of fifteen hundred dollars per annum; but for the performance of these various duties he receives three thousand dollars per annum and house-rent; and while performing these duties, upon this pay, these charts have been, and are being, created by him, and published and distributed by the Government. Can Congress specially reward a valuable discovery or invention, achieved under such conditions, consistently with the public interests? And, if it can, do justice and expediency require it? Will such rewards have a tendency

to develop, encourage, and maintain the zeal, devotion, and abilities of public servants, or are they calculated to repress or weaken them?

“When a man enters the Naval service, he without a doubt surrenders certain rights of the citizen; for instance, he cannot quit the country without leave; he cannot make certain bargains and contracts; and he is specially bound to render particular services which are determined by law, custom, and the usages of the sea. Though he has given up his energies, both of body and mind, for certain things, he has not given them up for *everything*. He gives them up so far as they are necessary to the performance of the recognized duties of his office. It is difficult, as we approach the ground where the line of duty begins or ends, to separate all the rights of the individual from the obligations of the officer. The exact limits of the line are obscure and uncertain.

\* \* \* \* \*

“So with the obligations of the officer and his private rights: they so overlap and blend in with each other, that as we approach the line where they pass into each other, it is difficult to mark it; but when we take the case of Whitney with his cotton-gin, and Fulton with his steamboat, even though they had been Navy officers, there is no difficulty in comprehending the rights of the individual to his own discoveries. Neither is there, it is submitted, any difficulty in recognizing the rights of the author to the discovery which he has expanded out into the Wind and Current Charts.

“It cannot be urged that, in giving form and expression to this chart idea, its author has done it at the expense of any other of the duties the Government had devolved upon him, for he has at the same time performed a class of duties that, in other services, are usually divided into three distinct departments, and which (as in England) are assigned each

to a special superintendent under a separate organization. And now that the British Government has decided to follow our example, and collect materials also for a series of wind and current charts, a special department in the Board of Trade has been created therefor, and one of the most distinguished and accomplished officers of the British Navy placed at the head of it.

"It would appear, therefore, that the American officer has carried out his idea, not at the expense of his duties proper, but in *addition thereto*. It may be supposed that he was stimulated to their performance by the energy that originality gives, and the excitement which is always attendant upon discovery and conscious progress towards the development of useful results.

"The facts that hydrographical officers have existed for ages; that none of them have led off in the construction of such charts as those under consideration; and the fact that England, with her hydrographical office, venerable with years and renowned for works, should, within the last year only, have created a new department and appointed a special organization for the purpose of carrying out the object of these charts, are significant proofs of the originality and merits of Mr. Maury's labours.

"Will it be said that Mr. Maury might have secured a copyright, and thus have reaped a reward for his labours? Admitting his right to have thus secured himself, should his omission to do so lessen the expediency and justice of remunerating him?

"Considering the profession to which the officer belongs and its tone, this waiver of right by him in the beginning, so far from operating to his prejudice now, ought to be held in his favour. Suppose this same officer should now discover some improvement in the means of navigation by which all the dangers of the sea might be cancelled, and wrecks and



disasters, such as have of late years shocked the public mind, rendered impossibilities ; suppose, moreover, that these means, like the charts, should involve only simple directions which, being once uttered, would from their nature be available alike to all, and therefore become the common property of the world ; now, instead of making known this discovery and proceeding to let the world have the benefit of it, as he did of the charts, suppose he were to come to compound with the Government, maintaining that the moment his secret was divulged it would, from its nature, become common property, and he would get nothing for his discovery from those individuals who were benefited by it, and therefore he must have from the public treasury so much money in hand, or his discovery should perish with him ?

“ Which of the two courses, the actual or the hypothetical, best becomes the American officer, and which would Congress most approve ?

“ The policy of the country in some cases, as in that of prize-money, dictates extraordinary rewards to its public servants. Men-of-war are provided, and officers are paid to cruise against the enemy ; yet the law provides not only pensions, but prize-money for their efforts in the strict line of their duty.

“ Your Committee, upon a full examination of the subject of the resolution referred to them, think that both justice and policy dictate that Congress should bestow upon the author of the Wind and Current Charts some substantial evidence of its appreciation of the benefits he has, by his labours, conferred upon his country. In view of the character of the work, and of the vast amounts which it has, and is, saving to the navigating, commercial, and agricultural interests of the country, independent of its benefits to these interests of other countries, it is impossible to find, or to adopt any rule or measure of reward to which exceptions may not be taken.

This officer has been for years in the public service, has a family to provide for, and is entirely dependent upon his annual pay; and for these reasons your Committee think that a sum of money, insignificant indeed in comparison to his services, yet sufficient to remove his anxieties and to cheer his hopes for the future of those dependent upon him, might be justly bestowed. Your Committee recommend that a sum of 25,000 dollars be thus appropriated, and report a Bill accordingly."\*

The ingratitude of republics has become proverbial. So far from any reward being offered to Maury for these well-known and widely-acknowledged services, in the following month public attention was engrossed by the astounding action of the Naval Retiring Board, which, through the jealousy of his brother officers, placed Maury in official disgrace, and reduced his pay to \$1500.

The following extracts from the Annual Reports of Secretaries of the Navy show the value of Maury's work at the Observatory :—

*Report of MR. WILLIAM A. GRAHAM, Secretary to the Navy.*  
Extract, Nov. 29th, 1851.

"The Act of Congress of March 3rd, 1849, authorized the employment of three small vessels of the Navy in testing

\* Of this move in the Senate I never heard my father speak; nor was it known to any member of the family. I am indebted for its presence in the book to the kindness of his friend, Mr. Thos. Harrison of the Naval Observatory, who, in obtaining for me copies of Bills (at the capital) and reports of secretaries, &c., relating to my father and his work, came across the above.

My father makes no allusion to it in a single letter (that I have found) written about that time. His whole correspondence for that and the following year is filled with expressions of surprise and wounded feelings that he, who had done so much for the good of the Navy, should have been treated with obloquy by his fellow-officers on the Naval Retiring Board. I doubt if he ever heard a word of the above proposition in Congress.

new routes on the ocean, pointed out by the Superintendent of the Observatory on his Wind and Current Charts, and in collecting information to enable him to perfect these charts. After the return of the brig 'Dolphin,' as already mentioned, she was fitted out and detailed on this service under the command of Lieutenant S. P. Lee, an officer of great experience and intelligence as a surveyor and hydrographer, and interesting and valuable results are expected from this cruise."

And from same Report later on :—

"The Naval Observatory and Hydrographical Office have [has ? being one] been in active and vigorous operation during the year. A second volume of the Astronomical Observations has been published, and already laid before you. The Wind and Current Charts, planned by Lieutenant Maury, the Superintendent of the Observatory, and prosecuted under his direction with much industry, are being extended to the Pacific and Indian Oceans. This work is viewed with great interest and satisfaction."

*Report of MR. C. DOBBIN, Secretary to the Navy. Extract,*  
Dec. 3rd, 1855.

"Gratifying evidences of the high estimation in which the labours of the Naval Observatory are held at home and abroad continue to be received. Several new sheets of the Wind and Current Charts, and an enlarged edition of the Sailing Directions which accompany them, have been published during the year. The usefulness of this work expands with its enlargement. Other maritime nations, appreciating the value of this plan of investigation, have united in a common system of observations for its further prosecution. It is earnestly suggested by Lieutenant Maury that this

system of meteorological research, if extended to the land, would afford for the agricultural interests of the country, and for science too, results quite as important as those which commerce and navigation have already received from it."

It was while analyzing and tabulating these millions of observations that he wrote his popular work, 'The Physical Geography of the Sea and its Meteorology.' "One of the most charming and instructive books in the English language," in the opinions of Humboldt and Quetelet. The *Edinburgh Review*, in noticing Maury's work, says:—"The extent of scientific information which this work conveys, or its easy unaffected style, cannot be at all gathered from the mere enumeration of the subjects of which it treats. The book must be read to be appreciated. It would be speaking of it in a very general way to say that it treats of the sea, its nature, currents, actinometry, and climates; the bed and bottom of the Atlantic; the influence of the Gulf Stream upon climates and commerce. It treats also of the atmosphere, winds, and their geological agency, storms and monsoons, calm-belts and sea-breezes, rains and rivers, the Arctic regions and the open Polar Sea, the Antarctic regions and their climatology, &c., &c." In the introductory remarks to this volume Maury says:—"I wish to announce a rule of conduct by which I have been guided from the commencement of this work, and by which I mean to be guided to the end; for not only has experience proved it wise, but it is in principle so good, that to it I attribute much of the success which has attended these labours. This rule has been to keep the mind unbiassed by theories and speculations; never to have any wish that an investigation should result in favour of this view in preference to that; and never to attempt by premature speculation to anticipate the results of investigations, but always to trust

to the investigations themselves." Well would it be for the world and for truth if all scientific men could be persuaded to adopt the same admirable rule. Of this book, upwards of twenty editions were sold in England alone, to say nothing of America and the Continent, where it also found large and ready sale, having been translated into the French, Dutch, Swedish, Spanish, and Italian languages.

The interest thus excited in the practical application of meteorology, enabled the distinguished author to assemble at Brussels, under the auspices of King Leopold, in the year 1853, a Congress of the chief nations interested in commerce, viz., England, Russia, Belgium, France, Holland, Sweden and Norway, Denmark, Portugal, and the United States, which he represented. The object of this Congress was the still further development of meteorological research. It resulted in recommending the establishment of investigating boards throughout Europe, and a uniform system of observations—the principle Maury insisted on being as applicable to the land as to the sea.

Prussia, Spain, Sardinia, the free cities of Hamburg and Bremen, the Republic of Chili, and the Empires of Austria and Brazil, afterwards offered their co-operation in the same plan. The Pope established distinguishing flags to be worn at the mast-heads of all vessels from the States of the Church, whose masters would co-operate at sea in the new system of research.

In peace and in war these observations were to be carried on, and in case any of the vessels on board of which they were conducted should be captured, the abstract-log was to be held sacred.

"Rarely," says Maury, in his account of this Congress, "has there been such a sublime spectacle presented to the scientific world before: all nations agreeing to unite and co-operate in carrying out according to the same plan one

system of philosophical research with regard to the sea. Though they may be enemies in all else, here they are friends. Every ship that navigates the high seas with these charts and blank abstract-logs on board may henceforth be regarded as a floating observatory—a temple of science.”

At the close of the Congress, Maury returned to his old post at Washington laden with honours and rich in fame. Many of the learned societies in Europe elected him an honorary member of their bodies. Orders of knighthood were offered him, and medals were struck in his honour. Humboldt declared that he had founded a new science.\*

\* The letters offering Maury orders of knighthood, and presenting him with medals, will be found in an Appendix, which also contains an imperfect list of the learned societies which enrolled him among their honorary members. But many of the diplomas were lost in the war.

## CHAPTER VI.

Scheme for meteorological co-operation on land—Invitation to Agricultural Societies to communicate observations for the construction of meteorological land charts—Proposal for a system of warnings to Farmers—Opposition he met with—His prophecy about the Weather Bureau—Weather Forecasts—Extracts from Mr. Harlan's Report before the Senate, praying for an extension of meteorological observations for the benefit of farmers—Letter to Mr. Dorr on the same subject—"Honour to whom Honour is due"—List of letters on this subject to be found at the Observatory—Fulfilment of Maury's prophecy.

MAURY's return from his labours at the Brussels Conference was accompanied by many acknowledgments of the great value of his services. But probably the most gratifying of those acknowledgments was the following letter from the great Prussian traveller, written at the age of ninety years:—

*From* BARON HUMBOLDT *to* LIEUTENANT MAURY.

Berlin, April 11th, 1857.

It is with the most lively acknowledgment that I offer to my illustrious friend and associate, the Superintendent of the United States Observatory and Hydrographical Office at Washington, the tribute of my respectful admiration. The Maritime Conference at Brussels, and the happy influence which your visit to Europe has fortunately exercised upon the course of meteorology both by sea and land, especially where your presence has been enjoyed, have contributed to spread your views. You are now enjoying the fruits of immense labours. It belongs to me more than to any other traveller of the age, to congratulate my illustrious friend upon the course which he has so gloriously opened.

Scarcely in a state of convalescence, I must limit myself at

present to offering you the tribute of acknowledgments due to you for so many years.

Your very humble and obedient servant,

ALEXANDER VON HUMBOLDT.

At the age of ninety years.

After his return from the Brussels Conference, Maury continued to push his scheme for meteorological co-operation on the land as well as on the sea; and in 1855 he delivered addresses before many agricultural societies of the South and West in which he urged the farmers to make daily observations (according to a uniform plan then set forth by him) on temperature, the force and direction of winds, storms, &c., and on the condition and yield of the crops, and to send them to him, as the sailors had done, to be made into land charts. Also to memorialize Congress for appropriations to establish a central office where these weather and crop reports could be digested and telegraphed monthly, weekly, or even daily, to all parts of the country, and "the farmers be thus warned of the approach of storms, severe frosts, &c., that might prove injurious to the crops."

On Jan. 10th, 1856, he addressed the United States Agricultural Society at Washington on this subject, and in the course of his remarks said:—"Now, sir, it may be asked, what have farmers to do with sanitary meteorology? I would answer, everything. The atmosphere is a great basin which envelops this globe, and every plant and animal that grows thereon is dependent for its well-being upon the laws which govern and control the 'wind in its circuits,' and none more so than man, the lord of all. To study these laws, we must treat the atmosphere as a whole. We have now the sea made white with floating observatories all equipped with instruments that are comparable, observing the same things according to a uniform method, and recording these observations according to a universal plan. In the process of



discussing the observations thus obtained from the sea, we have arrived at that point at which observations on the land are found to be essential to a successful prosecution of our investigations into the laws which govern the movements of the grand atmospherical machine. At sea we have the rule; on land we look for the exceptions. We want to see the land, therefore, spotted with co-labourers observing also, according to some uniform plan, such as may be agreed upon with the most distinguished meteorologists at home and abroad; and I have addressed myself to the agricultural interests of the country, because they have the deepest stake in the fence.

“This proposition concerning agricultural meteorology is a concerted plan” (see Maury’s suggestions on this subject to the Meteorological Congress at Brussels in 1853), “and the idea is to spread this network of instruments and observers, not only in this country, but over other parts of the world also. And I am assured that men of science and influence from abroad, such as Baron Humboldt, Gornord, Le Verrier, Quetelet, Dove, Littron, Secchi, Jansen, Sabine, &c., stand ready with a host of others to co-operate with us according to any plan that shall be agreed upon. This meteorological plan, it appears to me, has precisely the tendency required for the emergency, for its tendency is to save labour and increase the harvests by foreknowledge.”

C. B. Calvert, president of the Maryland Agricultural Society, rose to say in accordance with Lieutenant Maury’s suggestions:—“That it had remained for the patient and long-continued observations of plain sailors, under the direction of this practical man of science, M. F. Maury, whom kings delight to honour, to find out the laws controlling the ocean storms. Let the observations on land be made by plain farmers, under the direction of Lieutenant Maury, and then such conclusions would be reached as would be of

practical importance." (See Journal of fourth meeting of the U. S. Agricultural Society.)

Nearly three years afterwards, Maury says, in an address before the North Ala. Mechanical and Agricultural Society at Decatur, Alabama:—"Several years ago I proposed, you recollect, a system of agricultural meteorology for the farmers, and of daily weather reports by telegraph from all parts of the country for the benefit of the farmers. Take notice now, that this plan of crop and weather reports is 'my thunder;' and if you see some one in Washington running away with it, then recollect, if you please, where the lightning came from."

The following letters to B. F. Minor of Albemarle, on the subject of Agricultural Meteorology, show how much Maury's mind was occupied with this most useful scheme:—

DEAR FRANK,

Observatory, Nov. 20th, 1855.

Your long, long letter of the 17th is just to hand, and it as "rich as the ooze and bottom of the sea." We shall keep dinner waiting for you Friday, and be merry when you come. We are going to have lettuce and green peas out of the garden on Friday (open air). Don't that sound like an agricultural professor?

You ask about the *plan météorologique*: why, it goes on swimmingly! I have almost volunteers enough now with offers of service and friendly aid, and signs of encouragement are pouring in every day. I send you the latest. There came by this morning's mail the two newspaper slips, and a letter from a gentleman in Missouri, informing me that the legislature of that State has authorized the establishment of five meteorological observatories, and voted the money for them. They are under his charge, and at my service for co-operation, and will fill up with observations any blanks I choose to send, &c. The enterprise looks well, and I begin to think I have hit the nail on the head. The Secretary asked me the other day to send him a paragraph or two for his Reports. I did so, offering to put in his mouth a recommendation of Agricultural Meteorology to

Congress. I begin to look upon the plan as a fixed fact. I intend to have this office expanded out into a hydrographical and meteorological department. I will here digest the farmers' reports from all over the country, and telegraph the results all about. If I get on the top of this agricultural wave, I'll ride over boards, &c.

Let me tell you how my letters come to be written at night always. You see we are all assembled in the parlour after tea; I am walking up and down, and smoking to refresh myself after the labours of the day, and prepare for those of the night. All hands are sitting around the centre table at their various occupations, and somehow or other the inkstand, the porcupine pens, and a sheet of paper are always right by Nannie (Curly), and she had just as well be writing words for me as be sewing stitches in moral pocket-handkerchiefs. It's finger and thumb any way; and you know, I think there is too much of that among the women-kind, and so I might as well fill up an odd end of time, and better too.

Nannie (Curly) is tired, and so are you. My head has got well, so I'll to work, and she to finger and thumb, keeping time to the "Song of the Shirt."

M. F. M.

*From his Daughter DIANA to B. F. MINOR.*

DEAR COZ. FRANK, Observatory, Washington, Dec. 18th, 1855.

Papa says I must write you a letter, but he is too busy to tell me what to say, so I expect you'll find this a "poor concern." Papa is re-writing his 'Physical Geography' for the Harpers. He is also busy just now "making bricks" (as he calls it) for the publishers in shape of a 'National Almanac,' (I think that is the name he intends giving it when finished), which is to contain valuable and interesting matter of all kinds for the multitude, and which the Harpers promise him will make him President of these United States. Papa had a letter from Quetelet, Astronomer-Royal of Belgium; he is going to put "Meteorology for the Farmers" in his 'Annuaire.' Most of the astronomers in Europe publish almanacs; judge of Quetelet's by the enclosed "brick"!

Lord Wrottesley says that they in England are ready to follow our lead about the meteorology for the farmers. He is President of the Royal Society. Papa had a letter yesterday from Mr. Wilder, saying that he wished to see his plan carried out, and asking him to address the Agricultural Society, of which he is President. It meets here on the 9th prox. All send love, and wish you and yours a merry Xmas.

Ever your affectionate cousin,

NANNIE (CURLY).

*To the same.*

DEAR FRANK,

Observatory, Jan. 11th, 1856.

I attended the U. S. Agricultural Society yesterday, by invitation, and spoke to the resolution about the plan meteorological. I had a regular scientific fight, and though the result was all I could have desired, yet it was utterly disgusting to encounter such miserable signs of jealousy and small feeling. You know that I have been after this "Meteorology for the Farmers" persistently since 1851, and that the Brussels Conference urged it; and you may recollect my telling you that I had had an interview last year, before leaving the city for the summer, with the Secretary of the Interior and the Commissioner of Patents in favour of their taking it up. Three or four weeks ago an article came out in the *Tribune*, saying my plan was intended to act as a rival to that of the Smithsonian. I knew the notion would be injurious to the working of the meteorological plan if it got out, so I wrote a letter to the *Tribune* in my own name to show what Henry of the Smithsonian was after, and what I was after, and that the two plans were no more rivals of each other than the astronomical observatories which are springing up in various parts of the country are to this one. So far from being rivals, they are quite the contrary, &c. Nevertheless, you can see how my plans for the public good may be embarrassed. It is time for scribe and scribe to dress for the party, and for scribee to undress for bed. Good-night.

M. F. MAURY,

*Per NANNIE (CURLY).*

*To the same.*

DEAR FRANK,

Observatory, Jan. 21st, 1856.

Betty, Nannie, and I are just finishing to-night the new edition of the 'Physical Geography of the Sea.' I send you the papers for the joint meteorological observations of the Smithsonian and Patent Office. The Agricultural Bureau has been up to propose to cut loose from the Smithsonian and join on with me. So you see how the world wags.

I do not see how the Smithsonian plan and ours at all interfere. I am for a quiet life. But unless the Agricultural Bureau wakes up and takes views very different from those expressed to me, not much will be done there. He speaks of wanting two or three clerks! Jansen has gone to India, and is going to set the Japanese and the Japs and the Chinese at work upon meteorology.

Yours,

M. F. M.

*To the same.*

DEAR FRANK,

Observatory, Jan. 21st, 1856.

You have seen that Com. Morris has been gathered to his fathers. He was decidedly the cleverest captain in the Navy; he is the third chief of this Bureau that I have assisted to bury since I have been in Washington. We sent the 'Physical Geography of the Sea' off to the publishers this morning, having put the finishing touches to it last night. Now don't you consider that smart work for Betty, Nannie, and me? We were told in December that the publishers would want it by the first of February; we have eliminated some, recast much, and added a good deal. I have now some back correspondence to bring up, and I then shall begin to flirt with the eighth edition of Sailing Directions. I cannot say anything about "Meteorology for the Farmers," for I have never mentioned the subject to a member of Congress, nor need I until the house shall "sheet home its topsails." I have a notion, though, that the plan will take, "dogs in the manger" to the contrary notwithstanding. I am to be inaugurated next Monday as President of the National Institute; they elected me in Henry's place about

a month ago. You have seen, in the *Intelligencer*, "the Parthian dart" he flung at us?

Nannie (Curly) is complaining of her pen, so good-night.

Yours,

M. F. M.

The whole subject is reviewed in Mr. Harlan's Report before the Senate, 1857 (to accompany Bill, 548), extracts from which follow :—

"The Committee on Agriculture, to whom were referred the several memorials in favour of extending to the land, for the benefit of agriculture, the system of meteorological observations and research which, under the direction of Lieutenant Maury, has been so successfully carried on at sea for the benefit of commerce and navigation, I now have the same under consideration and beg leave to report.

"The system of meteorological observation and research to which your memorialists refer was inaugurated by Lieutenant Maury, about ten years ago, while in charge of the Hydrographical Department, for the purpose of improving certain maps and charts relating to the winds and currents at sea. These maps had been constructed out of materials collected from the old 'log-books,' which from time to time had been returned to the Navy Department from the armed cruisers of the Government of the U. S. They related to a few only of the many commercial paths of the ocean. They were necessarily very imperfect in consequence of the want of proper data, but were nevertheless valuable to the merchant marine. Lieutenant Maury obtained leave from the Navy Department to offer them to sea-captains in the merchant service on the condition contained in the following circular, sent to masters and shipowners :—

"Here are certain charts which embody, to some extent, the experience of the officers of the Navy, as to winds and currents, in certain parts of the ocean.

“‘If you will cause to be kept on board your ship a journal, or abstract, as it is called, telling according to a prescribed form how you find wind, weather, and sea, and if at the end of your voyage you will return the same to the Observatory, then I am authorized to say that you shall be entitled to receive not only a copy of the charts now offered, but a copy also of every other chart for which you shall assist in collecting the material.’

“As a result of this proposition, more than a thousand American merchantmen were soon engaged, night and day, in all parts of the ocean, in making observations according to a uniform plan, thus contributing by voluntary co-operation in the execution of the most extensive system of philosophical investigation ever attempted in any age. It was at once appreciated and approved by other commercial nations. They cheerfully volunteered the co-operation of their navies, military and commercial, to aid in its successful prosecution. Thereupon Lieutenant Maury sought and obtained leave to confer with the most distinguished meteorologists at home and abroad, for the purpose of arranging a uniform plan among all nations of meteorological observations. A conference upon this subject was consequently held at Brussels, in 1853, in which the principal States of Europe were represented. This conference recommended a plan of observations which has been generally adopted by all seafaring people. It was approved by Congress. A resolution was adopted directing the Secretary of the Navy to place three Government vessels under the direction of the Superintendent of the National Observatory, to aid in perfecting the system of observations so cheerfully undertaken by the commanders of nearly all the merchant ships and ships of war afloat on the ocean without cost to their respective Governments.

“And thus data are furnished for the construction of the

Wind and Current Charts, that are revolutionizing navigation. The results already obtained have astonished the world, and the advantages annually derived by commerce are estimated by millions.

"The importance of these achievements immediate and prospective, as well as the credit due to Lieutenant Maury as the originator of this system of observations, has been noticed in the most decided and flattering terms by the Secretary of the Navy in his several Annual Reports of 1850, 1851, 1852, 1853, 1854, 1855, and 1856; by the Committee on Naval affairs in an able report made to the Senate, January 29th, 1855; and by the President of the United States, in his annual message in 1851; as well as by the most important nations of Europe, a number of whom have solicited permission of Congress to confer on him suitable expressions of their appreciation of his brilliant achievements as a man of science, and of his exalted position among the benefactors of his race.

"This is a brief and imperfect notice of the system of meteorological observation and research at sea, which your memorialists pray may be extended to the land. In the opinion of your Committee, it is worthy of consideration whether this may not be necessary in a commercial point of view, independent of the influence on the interests of agriculture, as an integral part of the system of observations already approved by Congress and the executive department of the Government, and it is in this light that your Committee propose first to consider the propriety of granting the prayer of your memorialists. As long ago as 1851, Lieutenant Maury urged the importance of including the land within this system of research. The Conference of Brussels above named, composed of some of the most distinguished men of the age, recommended such an extension. Their deliberations, however, were confined by their instructions to the



sea ; and since they could do no more, they expressed a hope that at some early day the plan might be so extended as to include the land also, and thus make the system universal. Since then Lieutenant Maury has repeatedly noticed the necessity of such co-operation with him by observers on shore, for the completion of this work. And in fact this necessity would be at once inferred from the slightest consideration of the subject by the most unpractised reasoner.

“Of the surface of the earth, about one-third is estimated to be land. This is divided by large bodies of water into continents and islands, some of them being of vast extent. Meteorological phenomena of a highly interesting character, and having important bearings upon the industrial pursuits of man, have their origin sometimes at sea. They are traced by the observer to the land, and there abandoned, notwithstanding the interest elicited, for the want of a proper system of co-operation. Similar phenomena may be discovered on the opposite side of island or continent ; but whether a continuation of the effects of the same causes, or originating elsewhere, it becomes impossible to determine. The atmosphere covers the land as well as the ocean. On land its electrical condition, its temperature, its humidity, and its movements, are, doubtless, subject to more rapid and complicated changes than on the sea. The effects only of these influences can be noticed by the mariner. The originating causes are on shore. Hence to understand the phenomena of the atmosphere, or to profitably study its laws, it must be studied as a whole. Your Committee find this to be the opinion of the most distinguished meteorologists, and that in their judgment the time has come to subject the phenomena of the atmosphere by land and sea to the system of minute and rigid investigation.

“It is believed that the Superintendent of the Observatory can obtain the necessary co-operation to enable him to subject

the atmosphere to this system of research by an appeal to the farmers similar to that made to the mariners, if the Government will furnish appropriate instruments and defray the expense of transmitting this intelligence to the Hydrographical Office. In order that these observations might be reliable, the instruments with which they are to be made must be correct. An appropriation of a small sum of money would be necessary for the purchase of a few standard sets, to be distributed among the States and Territories, for use and comparison, under suitable regulation to be prescribed by the Secretary of the Navy.

"It would be highly desirable, also, to be able to receive from all parts of the country daily reports by telegraph. In this way the condition of the atmosphere in every part of the country, the presence of a storm in any quarter, its direction, its force, and the rapidity of its march, could be known at every point any hour of the day; simultaneous reports from the various stations of the character of the weather, being received and combined at the central office, could not fail to afford results of the highest interest and advantage to every industrial pursuit.

"Storms having their origin in one part of the world, and taking up their line of march for another, may be thus narrowly watched by the mariner in communication with the land, in many instances for days before they would reach his shipping. Being forewarned, he could adopt the necessary means to evade their fury. The same intelligence thus communicated to the farmer and out-door labourer would be equally useful in its results. Every intelligent farmer, who is willing to note his observations, would become a sentinel on the watch-tower and outpost of this broad land, to admonish his fellow-labourers in the fields, as well as his co-labourers on the sea engaged in carrying his produce to distant markets, of approaching foul weather and con-

sequent danger; and it is confidently maintained by those whose opinions are entitled to the greatest weight, that with such a system of observation the laws that govern the course of those storms would soon be so well known, that, in most cases, shipmasters and out-door labourers could be forewarned of their approach. Lieutenant Maury has also suggested that by mapping the skies, for example, of the United States, and adopting a system of signs and symbols, these telegraphic observations may be so projected on this map as to convey to the observer, at a glance, a knowledge of the appearance of the sky all over the whole country any hour in the day; and that by this means the change of the appearance of the sky, and subsequent changes of weather all over a continent, may be seen and studied from day to day; from which it is believed that science would deduce results of the highest importance. But, however important to commerce and navigation and all the industrial pursuits these observations may become from the considerations above named, agriculture has a still deeper interest in them.

“The growth of a plant is not the result of accident, but of natural causes. The phenomena of the vegetable creation, therefore, is as palpable for the investigation of science as the phenomena of the sea. . . .

“With a knowledge of the laws that govern these forces, the gardener will take a plant of any genus, species, or variety, from mountain or valley, from rocks or alluvion, from torrid or temperate zone, and by artificial means create a climate for its reproduction. If then the climate of any region, the character of the soil, and its ordinary meteorological forces could be fully understood, it would not be difficult for science to designate precisely the plant and fruit for which it is best adapted, and thus to determine for the agriculturist, with reasonable certainty, in advance perhaps of years of wasted labour, the capabilities of his fields. . . .

Place these crude annotations of meteorological phenomena over the land in Maury's hands, and we may reasonably expect him to point the farmer to a suitable field and climate for the production of the desired crop, in advance of the footprints of the immigrant. . . . Hence it is seen that, on land as well as at sea, climate is not controlled by latitude alone. And in a country like ours, blessed with every variety of soil, great geographical extent, and with the most charming diversity of landscape, it could not be expected that mere distance from the equator would convey any correct idea of climate and agricultural adaptation. The true index of these is to be sought for in careful observation and laborious investigation, conducted according to thermal laws and by geographical conditions. . . .

"To ascertain the limits of plants, to mark them out upon this broad land, to describe the climate and productions pertaining to them, is the initiatory labour proposed by your memorialists, which, in their opinion, deserves the patronage of the Government, that these may be projected on maps of the land similar to those made by Lieutenant Maury of the sea. They propose that this labour shall not be left to the officers of the army alone, whose posts are often widely separated from each other, frequently changed, or totally abandoned, as the exigencies of the service may require, rendering their observations too scanty and irregular for the attainment of satisfactory results. It has been suggested by Lieutenant Maury, and approved by your memorialists, that the number of observers may be multiplied indefinitely by inviting the farmers, like the mariners at sea, to make voluntary observations of the weather, crops, soil, and flora, and report regularly to a common superintendent, by whom they also shall be discussed and classified. In this way, it is expected that thousands of additional observers may be enlisted in this service, from whose joint labours, in col-

lecting crude materials for scientific analysis, a very rich harvest of knowledge would soon be obtained.

“The regular report of the condition and prospect of the growing crops, from every part of our country to a central office, as contemplated by your memorialists, furnishing the data of official bulletins, would be of sufficient importance to both producer and dealer to secure the approval of the Government. But, when all commercial countries are to be embraced in the same system of observation and research, its importance becomes overwhelming. In consequence of the introduction of steam, the improvement of navigation, the construction of railroads, the spread of commerce, the use of the telegraph, and the rapidly increasing facilities of intercourse, the farmer and planter of the United States is almost as much interested, practically, in knowing the state, prospect, and amount of crops in foreign lands as in his own country.

“The wheat-grower of Illinois is not only concerned to know whether the wheat crop of other States is above or below the average, but also whether a short or very abundant crop has been harvested in Europe. The crops in the other parts of the world tend to increase or diminish the price of his own grain; for in the markets abroad he is compelled to compete with the grain grown upon the waters of the Black Sea, in the Canadas, and elsewhere. In Liverpool the corn of the Danube competes with that of Kentucky and Indiana. The sugar-planter in Louisiana is directly interested in the abundance of that crop in Cuba and Brazil. A short crop of cotton in India and Egypt enhances by millions the value of that crop in the valley of the Mississippi; and so with all the other great staples of agriculture. To enable the farmers to know in advance the prospects of the growing crops with which their own must compete in the market of the world, is to enable them to reap the just reward of their own industry; to refuse it is to place them at the mercy of the dealer.

“Such are some of the more obvious results which agriculture is certain to reap from the adoption of the system of research proposed by your memorialists. And important and valued as are the benefits thus promised, we are entitled to count upon others still more valuable, but which no sagacity can anticipate. An apt illustration of the value of these unforeseen results is afforded by the very system of research that the memorialists pray may be extended to the land. That system had for its object the investigation of the direction of the winds and the set of the currents at sea for the benefit of navigation. Important as are the bearings of the results actually obtained in this regard, they dwindle into a small compass when compared with results and discoveries that have been brought out, and that were neither enumerated among the original objects of research, nor contemplated by any one.

“Among these may be mentioned the demonstration of the practicability of establishing a submarine telegraph across the Atlantic. No such problem was embraced by Lieutenant Maury in his original plan of research; yet the discoveries made during the course of his investigations upon winds and currents demonstrated its practicability. Thereupon a company has been formed, the capital raised, and contracts made for spanning the Atlantic with a telegraphic cable, the success of which will scarcely admit of a doubt. So doubtless it will be when the proposed system of research shall be extended to the land.

“When it is considered that this proposed research by land is a necessary part of the system now so successfully prosecuted at sea—that the interests of navigation and commerce demand it—that the direct and certain advantages to agriculture would be incalculable—that the field is broad, and reasonably promises other important results that no foresight can particularly define—that the same officer who has

secured the applause of the world for his achievements in that part of the field already traversed is anxious to enter this, and stake his reputation on reaping another rich harvest of honour for his country—that it is necessary to place our farmers and planters on an equal footing with those of Europe and Asia in the markets of the world—that the agricultural and planting interests of this country surpass all other interests—that heretofore the federal legislature has addressed itself to the advancement of these great interests so rarely and with such sparing hand; when we compare the means with the end—the magnitude of the results confidently expected with the amount of money required; and when we recollect how much of the legislation of the country and of the public money is applied to other interests so small in comparison, and that other nations, through the influence of their scientific men, are volunteering their co-operation so as to extend this system to the whole earth, your Committee are unable to discover any sufficient reason for withholding the sanction of the Government of the United States. They therefore recommend that the prayer of your memorialists may be granted, and ask leave to introduce a Bill.”

In the following letter from M. F. Maury to E. P. Dorr, President of the Lake Board of Underwriters, the subject of meteorological observations for the great lakes is discussed:—

DEAR SIR,                      Observatory, Washington, December 28th, 1858.

Your letter of the 25th in relation to the system of meteorological observations for the lakes, was received this morning. You make reference to the system of army meteorological observations, and seem to think that that covers the whole ground, and renders useless any further action by the lake people. Allow me to correct this mistake on your part.

That Captain Meade and his able corps of assistants, who are surveying the lakes, should be already provided with barometers, psychrometers, thermometers, and wind and rain gauges, is a fresh and striking illustration of the fact to which I called the attention of the lake people with so much emphasis, viz., that the means and appliances for such a system of meteorological co-operation and research as I proposed for the lakes are already at hand, and that what remains to be done is to engraft upon them the telegraphic feature with the plan of instantaneous discussion.

Now, suppose that Captain Meade's observers, in addition to the observations they are already making and entering on their journals for his examination at some future day, were required daily also to transmit certain of them by telegraph to his office; that he had force enough there to take them up on the instant and to discuss them at once, that he might detect the storm while it is yet gathering, and then to send out by telegraph again warnings to the lake shipping of its approach.

If he had the means of doing this, he would then be doing the very thing I advocate, and there would be no necessity for future action on your part. But, unfortunately, Congress has not placed in his hands the means for carrying out any such system—at least, I am not aware that it has—and that Congress should place means for such a purpose in his hands, or the hands of some of his brother-officers on lake duty who are equally accomplished, is what I imagine the good people of the lake country desire.

You recollect that when among you, some time ago, I called attention to the fact that all the observers, instruments, and appliances needed to make the observations required, were at hand willing and ready for the work. Here is a fresh proof of this fact, for I am delighted to learn from the slip you send me that Captain Meade is preparing to establish the meteorological observing stations from the east end of Lake Ontario to the west end of Lake Superior. No doubt the Canadian authorities would, if invited, most heartily co-operate in this system by establishing similar posts, if need be, along the northern shores. And then, as I



said, it would cost nothing additional to have certain of these observations reported by telegraph daily to some central office for instantaneous discussion and promulgation.

In addition to Captain Meade's corps, and the Canadians, it was held, when advocating the subject among you, that other army officers, also, employed on the lakes—that the lighthouse-keepers there, that the agents of the Lake Board of Underwriters, that the colleges, the hospitals, the public institutions and amateur meteorologists on and about the lakes, might without the cost of one additional cent to the public treasury be, in furtherance of this plan, organized into the most effectual and effective corps of observers that was ever engaged in carrying on any plan of physical research; and that all that was required of Congress in the premises was a simple enactment authorizing such an organization, and appropriating a sufficient sum of money to defray the office expenses of treating the observations after they are made, and of announcing the results after they are obtained.

The system of observations which I propose for the lakes should not be confounded with that admirable system which has been so long conducted by the army, and to which alone we are indebted for almost all we know concerning the climatology of the country. The system I propose is an extension to the lakes of that system of co-operation and research which has proved so beneficial for commerce and navigation at sea, with this difference, viz., that certain of the observations be reported daily to a central office by telegraph, and this telegraphic feature is a great improvement upon the sea plan. The army system is not telegraphic; it was established long before the electro-magnetic telegraph had any existence; and it originated in this way. When Mr. Calhoun left college—and Yale, I think, was his *alma mater*—he was in delicate health, and it was thought advisable that he should return to Carolina on horseback. He did so, and for the sake of the mountain air and scenery he skirted along the Alleghanies and Blue Ridge. On that journey he was struck with the difference in the weather that he often observed on opposite sides of the mountains. His youthful mind was impressed with the importance which a properly

conducted system of meteorological observations over the whole country would prove to be.

Accordingly, when he became Secretary of War he bore these circumstances in mind, and in 1819 that system of meteorological observations which has proved so beneficial to the whole country was inaugurated in the army, and from that day to this it has been carried on without interruption, and the results have been published from time to time in the Surgeon-General's Office. In these observations the telegraph is not used at all, and the results, instead of being proclaimed on the instant, and announced so as to give warning of the coming of the storm, are frequently not published until years have elapsed. In short, by the army plan the observations are made one year and discussed the next. The results, so far as the state of the weather on any particular day is concerned, are consequently retrospective, so to speak. They will tell on the 1st of January, for instance, what sort of weather you had on the lakes on the 1st day of December previous. But my lake plan proposes to warn you from observations made to-day as to the weather you may expect to-morrow, and then for the further investigation of any particular phenomenon that may present itself, the lake plan proposes to refer to and consult the monthly records after they have been made and returned to Captain Meade, or elsewhere, from the observing stations. You observe, therefore, that the two plans, so far from superseding the one the other, or interfering with each other, are co-operative; and the fact that Captain Meade and those engaged with him on the survey of the lakes are so well provided with instruments, instead of being a reason for inaction on your part, is an additional reason why you should put your shoulder to the wheel with so much the more energy; for the assistance which such a corps of observers as he will bring into the field may render, will be of the greatest importance to the telegraphic plan.

I therefore hope, that so far from reading, in what Captain Meade is reported to have said in the Detroit papers, anything to discourage further action on your part, you will gather encouragement, and look upon him and his assistants

as fellow-labourers, and most valuable ones too, in the great cause. I do not (allow me again to say) read in the accounts you send me of what Captain Meade is represented to have said concerning the system of meteorological observations which he is about to inaugurate on the lakes, anything which was intended, or that is calculated to damp, your efforts in behalf of a system of daily weather reports by telegraph to some central office on the lakes. In that account no allusion is made to the telegraph. If, however, Captain Meade should wish to engraft any such feature upon his plan, I hope you will lend him a hearty co-operation, for I should consider it most fortunate if the telegraphic plan should fall into the hands of gentlemen so capable of taking charge of it, and of bringing it into satisfactory operation, as are those of either Captain Meade or of his brother-in-law, Colonel Graham.

Respectfully, &c.,

M. F. MAURY.

To Capt. E. P. DORR,  
Buffalo, N. Y.

A letter from E. P. Dorr, written to a relative since Maury's death, enclosed the above letter for publication ; and deserves insertion here, because it gives the illustrious hydrographer the credit that is so justly due to him :—

Buffalo, Feb. 1873.

. . . . I send you a copy of an original letter written to me by the late M. F. Maury on December 28th, 1858. The circumstances calling it out were these. He came here and lectured during that month and year, and called on the writer, who was then President of the Lake Board of Underwriters, having, at all the principal cities around the lakes, marine inspectors or surveyors subject to my orders. Maury unfolded to me his plan in substance as set forth in this letter, and asked me to aid him. He wanted to "discuss" the observations daily at Washington, as they now are . . . . His intelligent, original mind invented and suggested the present system of meteorological observations ; and the writer wishes this in some way to be put upon record, to do justice

to the dead Maury, a man whose name and memory will live in all civilized countries on the globe, throughout all time, as an original, great mind.

After Maury left here, I drew up a caption, heading several papers as a memorial to Congress, asking them to enact a law and appropriate funds to carry out (which is now being done) Maury's plan. This was sent to him at Washington by me, approved and returned. I then sent to each important city upon the lakes (eight of them this city included), to the marine inspectors, procured the signatures of all prominent men, and then forwarded to each member of Congress representing the districts.

These memorials asking for the enactment of the law, and the appropriation of the money, I think, did not pass in the winter of 1858-59; but I have been told that the interest excited in the plan at that time by one person (who followed it from its conception) resulted in its ultimate passage and the present system.

What called out this letter specially from Maury was this. General, then Captain, Meade, had just assumed the command of the "Survey of the N. W. Lakes," succeeding Macomb. There had always been a jealousy between the army and navy, and there was particular jealousy because of the prominence of Maury, in being so constantly noticed by the eminent and titled men of the Old World. Some articles (not emanating from Meade—he was too good and too noble a nature to do such things) called in question the necessity of Maury's doing anything of the kind, as Captain Meade had provided for a full working of all observations needed, to begin with the opening of navigation, and to extend all over the lakes. I cut out the articles and sent them to him (Maury) at Washington, without comment, and that called out the enclosed letter. Colonel Graham had charge of the public works at Chicago at that time. He and Meade are now both dead. . . Things have changed, but I could not rest unless I told some one that the late M. F. Maury was the originator in design and detail, in all its parts, of the present system of meteorological observations now so generally taken all over the country. "Honour to whom honour

is due." You see in what a beautiful way he gives the credit to Mr. Calhoun as the originator of the army plan, which was continued down to the breaking out of the late civil war; that part of it alone is of great interest, and there are but few people who have the knowledge of these facts.

When the National Board of Trade met here some two or three years since, I published in the *Courier* parts of Maury's letter. There was a Committee appointed on the subject of meteorological observations, and I thought it a good time to give this forth—in part. Not long before General Meade died, he was spending a few days at my house. I showed him M. F. Maury's letter; he was much pleased, and wanted me to publish it as a subject of national interest; but I am accustomed to mind my own affairs only, and I did not do it. But now both are dead, I give it to you on account of your relationship. There are other letters here from M. F. Maury, referring to his thoughts upon this subject, but none so full, and he only wrote to one other person here. . .

Respectfully yours,

E. P. DORR.

On December 14th, 1880, Mr. Vest of Missouri said, in a speech before the 46th Congress, 3rd Session :—

"The whole signal-service system of this country originated with the navy, not with the army. The man who commenced it, in whose brain it first had existence, was M. F. Maury. In 1853 he instigated and brought about, by his own individual exertions, the assembling of a convention of scientists of the world at Brussels, to take into consideration a uniform system of meteorological observations. In 1857 I well recollect that Lieutenant Maury passed through the South and West, delivering lectures at his own individual expense to the people, urging upon them that they urge their members of Congress to establish a signal-service observation system for the Southern and Western States. If that had been done then, sir, millions of dollars would have been saved to the agricultural interests of this country.

"This same man, by his system of research upon the ocean, by shortening the days of transit by means of his charts of the waves and of the winds, saved to the commerce of the world from \$40,000,000 to \$60,000,000 annually, and he sought earnestly, by stirring up the people, by writing and lecturing in the North and West and South up to the Fall of 1860, and again after the war to within three months of his death, to put the same system into existence within the landed domain of the United States."\*

Early in 1858 Maury had produced such an impression by his lectures and writings in the North-West, that no less than eight of the lake cities, Buffalo amongst them, memorialized Congress in the same year to "establish a general system of daily telegraphic reports on the wind and weather, for discussion at a central office"! . . .

The law thus prayed for was not passed by Congress at that time; but it has been since, and under its fostering care has grown into the "vast weather bureau" of the present day. It will scarcely be believed, that in the history of that grand work the name of its illustrious founder is not mentioned, thus fulfilling his prophetic fear. And to-day, although almost every one in the civilized world listens to "the thunder," no one remembers where to "look for the lightning."

\* *Telegraphic Meteorology*.—In this connection see letter to editor of *Southern Planter*, April 20, 1855; editor, *American Farmer*, June 18, 1855; Prof. Quetelet, Brussels, July 24, 1855; Edward T. Taylor, Oct. 18, 1855; Va. State Agricultural Society, Dec. 1, 1855; editor of *N. Y. Tribune*, Dec. 19, 1855; Hon. James Harlan, Jan. 5 & 10, 1857, in reference to Bill and Report introduced by him in Senate; Dr. Leiber, Jan. 24, 1857; Hon. C. J. Falkner, July 23, 1857. And in reference to daily weather reports by telegraph "on land," letters to H. S. Eaton, Dec. 6, 1859; to Gov. Dennison, Ohio, June 4, 1860; to Prof. Secchi, Rome, April 10, 1860; and to Lieut. Margollé, London, April 12, 1860. All these are on file in Lieut. Maury's letter-books at the National Observatory at Washington.

## CHAPTER VII.

Deep-sea Soundings—Maury prophesies the existence of the telegraphic plateau—Brooke's invention of a deep-sea lead—Extract of a letter from the Secretary of the Navy—Maury's letters to the Secretary, suggesting the place for the cable, and the kind of line to be used—Dinner at New York to celebrate the first arrival of a message across the ocean—Cyrus W. Field's speech—The cable ceases to work—Maury explains the cause—Letters on file at the Observatory on this subject.

As early as 1848, Maury, in the course of his investigations of the winds and currents, had been led to the conclusion that there existed between Newfoundland and Ireland a broad and level plateau at the bottom of the ocean. In 1849 Congress directed the Secretary of the Navy "to detail three suitable vessels to be used in testing new routes and perfecting the discoveries made by Lieutenant Maury." Under the authority of this instruction, vessels were despatched from time to time. From 1849 to 1851, the U. S. schooner 'Janey' was so despatched, in command of Lieutenant Walsh, under whom were Samuel Marcy, R. J. Farquharson, George H. Hare, A. Allmont, and C. W. Wooley. In 1851-52, the U. S. Brig 'Dolphin' was commissioned by Lieutenant S. P. Lee. His officers were E. A. Borbot, J. P. Hall, Edward Renshaw, J. D. Donell, and W. K. Mayo. Lieutenant O. H. Berryman succeeded to the command of the 'Dolphin' in 1852-53, under whom S. R. Franklin, W. T. Truxton, Beverly Kennon, G. W. Morris, and H. M. Garland were appointed to serve.

In speaking of the sounding operations of these officers

Maury says, in his Sailing Directions:—“As yet no specimens of the bottom in deep water had been brought up. The line was too small and the lead too heavy to be handed in. In this state of the case, passed Midshipman John Minor Brooke, then stationed at the Observatory, proposed a contrivance by which the plummet or shot, on striking the bottom, would detach itself and send up the line with a specimen of the bottom. This beautiful invention is called ‘Brooke’s deep-sea sounding apparatus.’”

Early in 1854, Maury wrote the following letter to the Secretary of the Navy on the subject of these deep-sea soundings, with special reference to the project of laying a submarine telegraphic cable across the Atlantic:—

SIR,

National Observatory, Feb. 22nd, 1854.

The U. S. brig ‘Dolphin,’ lieutenant commanding O. H. Berryman, was employed last summer upon special services connected with this office. . . . He was directed also to carry along a line of deep-sea soundings from the shores of Newfoundland to those of Ireland. The result is highly interesting upon the question of a submarine telegraph across the Atlantic, and I therefore beg leave to make it the subject of a special report.

This line of deep-sea sounding seems to be DECISIVE of the question as to the practicability of a submarine telegraph between the two continents *in so far as the bottom of the deep sea is concerned*. From Newfoundland to Ireland the distance between the nearest points is about 1600 miles, and the bottom of the sea between the two places is a plateau which seems to have been placed there especially for the purpose of holding the wires of the submarine telegraph, and of keeping them out of harm’s way. It is neither too deep nor too shallow; yet it is so deep that the wires but once landed will remain forever beyond the reach of the anchors of vessels, icebergs, and drifts of any kind, and so shallow that they may be readily lodged upon the bottom. . . .



A wire laid across from either of the above-named places on this side to the north of the Grand Banks, will rest on that beautiful plateau to which I have alluded, and where the waters of the sea appear to be as quiet and as completely at rest as it is at the bottom of a mill-pond. It is proper that the reasons should be stated for the inference that there are no perceptible currents and no abrading agents at work at the bottom of the sea upon this telegraphic plateau. I derive this inference from the study of a physical fact, which I little deemed, when I sought it, had any such bearings.

Lieutenant Berryman brought up, with "Brooke's" deep-sea sounding apparatus, specimens of the bottom from this plateau. I sent them to Professor Bailey, at West Point, for examination under his microscope. This he kindly undertook, and that eminent microscopist was quite as much surprised to find, as I was to learn, that all these specimens of deep-sea soundings are filled with microscopic shells. To use his own words, "not a particle of sand or gravel exists in them." These little shells therefore suggest the fact that there are no currents at the bottom of the sea whence they come; that Brooke's lead found them where they were deposited in their burial-place. . . .

Had there been currents at the bottom, they would have swept and abraded and mingled up with these microscopic remains the *débris* of the bottom of the sea, such as ooze, sand, gravel, and other matter; but not a particle of sand or gravel was found among them. Hence the inference that these depths of the sea are not disturbed either by waves or currents. Consequently, a telegraphic wire once laid there would remain as completely beyond the reach of accident as it would be if buried in air-tight cases.

Therefore, so far as the bottom of the deep sea between Newfoundland, or the North Cape at the mouth of the St. Lawrence and Ireland is concerned, the practicability of a submarine telegraph across the Atlantic is proved. In this view of the subject, and for the purpose of hastening the completion of such a line, I take the liberty of suggesting for your consideration the propriety of an offer, from the proper

NOV 11 1871

source, of a prize to the company through whose telegraphic wire the first messages shall be sent across the Atlantic.

I have the honour to be, &c.,

M. F. MAURY, Lt. U.S.N.

To Hon. J. C. DOBBIN,  
Secy. of Navy.

Maury's labours are noticed in the Annual Report of the Secretary of the Navy in 1856, who dwells upon questions relating to ocean telegraphy in the following extracts :—

“The indefatigable Superintendent of the Naval Observatory, not content with aiding commerce and the untaught mariner by pointing out the safest and shortest tracks on the ocean where friendly winds and currents may be found, nor yet with the contributions to the intelligence of the country resulting from observing the stars of the heavens, has, for some time past, thought it not visionary to urge upon the public attention a new study, denominated by Baron Humboldt the ‘Physical Geography of the Sea.’ He had also been so bold as to insist that, whenever a survey could be made of the bottom of the ocean between Newfoundland and Ireland, it would be ascertained that such were the moderate depths, such the perfect repose there, and absence of abrading or disturbing currents, that telegraphic wires could be laid as safely and successfully as upon land.

“Lieutenant Brooke, of the Navy, had invented a most ingenious yet simple contrivance, in connection with the shot used, by which the moment it touched the bed of the ocean it became detached, and carefully took up specimens of whatever it came in contact with, and brought them up safely to the operator. Many of our enterprising countrymen, very naturally desirous of seeing accomplished so grand an undertaking, were anxious that all doubts of practicability should, if possible, be removed by actual observation and examination.

"An Act was passed in 1849 giving authority to the Secretary of the Navy to use national vessels for testing new routes and perfecting the discoveries made by Lieutenant Maury. I confess I felt some pride in having the science and naval genius of our own country to continue foremost in these great ocean surveys, and in illustrating the practicability of so grand a conception as harnessing the lightning and making it obedient beneath the profound depths of the great sea which Providence has placed between the Old and the New World. There was no difficulty in finding a competent officer to make these soundings, directed by Lieutenant Maury. Lieutenant Berryman, of large experience and established reputation in deep-sea soundings, full of that enterprising spirit so characteristic of American officers, was not only ready, but earnestly solicitous and eager to be permitted to execute the task. The small steamer 'Arctic' was lying idle at the Brooklyn Navy Yard, and was pronounced suitable. The order was issued, and Lieutenant Berryman, accompanied by Lieutenant Strain, passed Midshipmen Mitchell and Thomas, Midshipman Barnes, and a few men, left New York on the 18th of July, crossed the ocean, and returned on the 14th of October, bringing with him abundant supplies of curious and interesting specimens from the bed of the ocean. In order to make his soundings approximate accuracy as nearly as possible, Lieutenant Berryman returned in the same latitude, and re-examined points where he had doubts. The length of the route surveyed is about 1600 miles; the greatest depth found was 2070 fathoms (about  $2\frac{1}{2}$  miles), the average, however, being much less. These soundings and specimens have been turned over to the Naval Observatory. The Superintendent has already caused the specimens to be analysed, and in the hands of a learned professor,\* whose

\* Prof. Bailey of West Point.

report is before me, they are made to tell much of the character and mysteries of that ocean-covered region. He thinks the appearance of the minerals indicate that they have been quietly deposited from gentle currents, and not subsequently disturbed.

"Lieutenant Maury affirmed now 'that the development of this survey established the practicability of laying wires successfully on the bed of the sea.'

"I will leave it to others, sir, to lift the veil of the future, and to picture to the mind of the curious and speculative the influence to be exerted by such an event upon commerce and trade, upon peace and war, and the relationship of nations.

"These deep-sea soundings, this study of the wind and currents and temperature of the ocean, these gradual approaches to greater familiarity with the wonders of the great deep, are pregnant with incalculable usefulness to those who conduct mighty navies, as well as to all who go down to the sea in ships.'"

Again, in a letter to Hon. William A. Graham (Secretary of the Navy), as early as November 8th, 1850, Maury said:—"You may therefore consider it a settled principle in submarine telegraphy, that the true character of a cable for the deep sea is not that of an iron rope as large as a man's arm, but of a single copper wire, or fascicle of wires, coated with gutta-percha, pliant and supple, and not larger than a lady's finger."

To Cyrus W. Field he wrote on the same subject, "that the iron wrappings for *deep-sea* lines of telegraph, instead of being advantageous in any aspect, are not only a hindrance, but an incumbrance also and a waste. The weight of the cord may be adjusted to sinking by the size of the conducting wire within as well as by the character of the

non-metallic wrapping without. Whether the insulating material be gutta-percha, india-rubber, or other matter, it requires to be protected from chafes and bruises while on board, and when it is being payed out."

All his suggestions were finally, after two disastrous failures, carried into effect. He was consulted by Cyrus W. Field and others as to the kind of cable to be used, the manner of laying it, and the best time of the year in which to lay it.\*

At a dinner given in New York in 1858, to celebrate the arrival of the first message across the Atlantic, when called upon to give an account of the work, Mr. Field rose and said—"I am a man of few words: Maury furnished the brains, England gave the money, and I did the work."† And yet these important services were not only unrequited, but are to this day to a large extent unknown.

As Admiral FitzRoy, an eminent *savant* of the British Navy, said of him, "one of his most distinguished traits was personal disinterestedness." "It was frequently remarked of him through life, that he never sought to benefit himself by his arduous labours, or to make pecuniary profit out of his researches. His sole object was to benefit mankind at large."

His nephew (General D. H. Maury), in speaking of this marked trait, says:—"I recall an illustration in point. When placed in charge of the Observatory his pay was small, and he had no other means than his salary. He was then fairly launched upon his career as a writer on subjects of national utility. Some papers of his, upon the advantages of a route to the East, by way of the Isthmus, attracted much attention. I was with him one morning when he opened his mail. He handed me to read a letter from a Northern firm, enclosing a cheque for \$500, in token of approbation of his views, which were strongly promotive of the interests of their business.

\* See Maury's *Sailing Directions*.

† See *New Eclectic Magazine* for July, 1870.

He was asked to continue his advocacy of that route, with the assurance that the enclosure was a mere earnest of what they would pay for it. 'Please to look at this,' he said; 'these people seem to think money the chief object of all endeavour.' He returned the cheque at once in a courteous note of thanks because he could not admit personal interest into his discussions of measures for the general good of the people."

In a letter to Jno. Locke, Esq. (read before the Royal Dublin Society, January 28th, 1857), Maury said:—"The real question for future protectors of lines of submarine telegraph is not how deep, or how boisterous, or how wide the sea is, but what are the electrical limits to the length of submarine lines."\*

The following letters will be found interesting in this connection:—

To PROFESSOR J. B. MINOR, *University of Va.*

DEAR JOHN,

Washington, July 26th, 1855.

The mails this morning, notwithstanding my protestations of yesterday, have changed my plans, by tempting me to Newfoundland. The company insist upon my going and bringing the whole family with me. It was a struggle between duty and inclination before; and now I think, considering the part that I have taken in the submarine telegraph, I should not be true to myself if I slighted this opportunity.

Yours truly,

M. F. MAURY.

\* In this connection see letter to Prof. Morse, Feb. 23, 1854; letter to Hon. C. J. Faulkner, Aug. 30, 1858; to Cyrus W. Field, forty-three letters between June 30, 1855, and March 26, 1860; Peter Cooper, Dec. 27, 1855; Hon. J. H. Dobbin, May 5 and Nov. 8, 1856; Hon. Isaac Toncey, Sep. 4, 1858. On the Telegraphic Plateau, see letters to Capt. Washington, London, Nov. 6, 1857; to Capt. de la Marche, Paris, Dec. 22, 1857; to *American Journal of Science*, Sep. 5, 1858; paper in reply to coast-survey claims; letter to Jno. Locke, Dublin, Dec. 29, 1858. All of these and more are on file at the Observatory.

*To the same.*

I have now before me coils upon coils of telegraphic cable, in samples, for the Atlantic. I have been most happy in devising a plan for making coilings and laying it down, which appear to me to obviate every difficulty. We shall see. . . . Johnny, Molly, and I go down to Fredericksburg Friday night; I shall return here Monday, join Dick, and start for the land of the Dacotahs. We are going, by invitation, to help lay the corner-stone of the Minnesota Historical Society at St. Paul's.

DEAR FRANK,

Oct. 16th, 1856.

I have been in the depths of the ocean. Brooke's lead has fished up Hecla or Vesuvius, or some other volcano. The Gulf Stream has its foot on it. . . .

Lat. 50° N. Lon. 35° W.

Lat. " " " 15° "

The bottom of the sea all along there is two miles deep and strewn with volcanic cinders and Gulf Stream organisms. A letter yesterday from C. W. Field. He was urging telegraphic patrons in London to adopt my plan for laying the cable. We shall see, after a while, what will come of it. If I could only get the right to one wire across the Atlantic! . . . \*

I have a piece of the cable they are making for the Atlantic; it's a great improvement over the others; but it costs three or four times as much as it ought to cost. Its breaking strain is four tons, and its weight about a ton to the mile. Its breaking strain need not have been over half of a ton, and its weight 500 or 600 lbs. to the mile. I'll risk anything on that.

Maury said, in a lecture delivered in Cincinnati, in November 1858, that he believed that the present "Atlantic Cable

\* Atlantic Telegraphic Company, by resolution of June 22, 1855, granted to Lt. M. F. Maury, free of charge, priority of use of its cable, when laid, for determination of longitude, &c.

can never be used. The reason why it has lost its power is, of course, mere conjecture ; but it is most probable that the copper conducting wires are broken ; every experiment made in 1857, and every one in 1858, save the final one, showed that the cable was too heavy, inasmuch as it parted, its own weight being the chief, if not the only cause.

"The copper wires being straight, and the iron outside covering being spiral, they were unequal to the strain and parted, perhaps one, perhaps two, or three, or all. When the fractures were fresh, the electric fluid might leap the chasm ; but as they became corroded it would fail to do so.

"He believed 'that an electric cord, not cable, should be laid,' and regarded the 'practicability of a submarine telegraph between Europe and America as a certain thing.' He had 'foretold the existence of a great Telegraphic Plateau, so named by him ; and before the invention of Brooke's deep-sea sounding-lead and the soundings made by it, had mapped it out before the world.' On this plateau the greatest depth of water does not exceed two miles ; it stretches from Newfoundland to Ireland, and across it are no running waters, nor any abrading forces. On it lie the smallest shells ; which if dried would float in the air like motes, being scarcely, if at all, visible to the naked eye, and as perfect as if they had been wrapped in down. These were shells of animals living near the surface, which had sunk after death to the quiet depths below.

"If such light substances would sink to the depth of two miles and lie unharmed there, a light wire, protected by any insulating substance, would sink to the same depth, and lie for ages in equal freedom from disturbing forces. Some heavier arrangement (cable possibly) would be required in the shallower waters at each end near shore, where tides affected the bottom.

"Such an achievement places man, as it were, in a higher



scale of existence, since he thus becomes mentally ubiquitous, —holding converse of thought with the people of every part of the globe.

“The accomplishment of the enterprise has been brought about by a variety of inventions and discoveries at different times, without regard to each other; and yet all were necessary to the successful laying and working of a submarine telegraphic communication. Without the knowledge of the Atlantic plateau, it would not have been deemed practicable to lay the cable; without the discovery of the uses of gutta-percha about this time, the wire could not have been rendered suitable; and without the steamships, it could not have been laid.” In this lecture Maury also paid just tributes to Mr. Morse, as the first inventor of the electric magnetic telegraph; and to the Messrs. Field as the projectors of the submarine telegraphic enterprise.

## CHAPTER VIII.

### THE NAVAL RETIRING BOARD.

IN the progress of the narrative, we now come to what was to Maury the most painful and mortifying episode in his career. Although restitution was made, and he was restored to the service and promoted by special Act of Congress, yet the iron entered into his soul.

On February 28th, 1855, was passed, by the Senate and House of Representatives, an Act to promote the efficiency of the Navy, by which it was provided that the President of the United States shall cause a Board of Naval Officers to be assembled, to consist of five captains, five commanders, and five lieutenants, who shall make a careful examination into the efficiency of the officers of the grades hereinafter mentioned, and shall report to the Secretary of the Navy the name and rank of all officers of said grades who in the judgment of said Board shall be incapable of performing efficiently all their duty both ashore and afloat.

The following is the official announcement, and the first intimation that Maury received that the Board had placed him on the Retired List:—

*To M. F. MAURY from J. C. DOBBIN, announcing the Finding of the Naval Retiring Board.*

Navy Department, Washington, D.C.,

SIR,

September 17th, 1855.

The Board of Naval Officers assembled under the Act to promote the efficiency of the Navy, approved Feb. 28th,

1855, having reported you as one of the officers who in their judgment should be placed on the Retired List on leave-of-absence pay, and the finding of the Board having been approved by the President, it becomes my duty to inform you that from this date you are removed from the Active Service List and placed on the Retired List on leave-of-absence pay.

You are, however, not detached from the Naval Observatory. I avail myself of the authority of the law to direct that you continue on your present duty,

I am, respectfully, your obedient servant,

J. C. DOBBIN.

"This Board," says Maury, "could only have given an average of ten minutes' 'careful examination' to the merits and demerits of each one of the 712 officers in our Naval Service. This Board met in secret, kept no record of proceedings, called no witnesses, and heard no arguments. They commenced their sessions on the 20th of June, and adjourned on the 26th of July. They lost several days by absence of members, and five days on account of Sundays. Their sessions commenced at 10 A.M. and lasted until 3 P.M. The Board were required by the Act of Congress to make 'a careful examination' into the efficiency of every officer. Their whole working time was less than 140 hours, during which period they adjudicated upon the claims of 712 officers, so that the 'careful examinations' amounted to an average of about ten minutes for each, the result of which was to seal the fate of many a good fellow who had served his country long and faithfully." Loud complaint was also made of the action of the Board in declaring incompetent, unworthy of promotion, and an incumbrance upon the Navy, the very men who for many years past and up to the present time had done and were doing so much for the interest and reputation of our country. Reference was particularly made to the case of Lieutenant Maury :—"There

seems to have been, on the part of the Board, a feeling which induced its members to take advantage of their irresponsible power to strike down almost every officer who had in any way distinguished himself by his scientific attainments; and in doing this they all took very good care to look out for No. 1, as will be evident from the following statement, which any one may verify for himself by examining the Naval Register. Of the officers whom the Board were called upon to scrutinize, there were 362 on the Naval List ranking *above* the youngest lieutenant on the Board, while below were 322. Every one of the 362 of the higher rank who was removed or retired, promoted or advanced one or more members of the Board, and we accordingly find that they blackballed 138. But on the lower list, the retirement of any member of which could not affect the Board, we find they only retired 46 out of 322.”\*

The press of the country rose almost as one man, and demanded the reinstatement and promotion of Maury. The *New York Journal of Commerce* said:—“Lord Nelson lost both an eye and an arm, yet his name was mighty in battle. Our officers have lost neither arms nor eyes, it is true; but they stand on the records of their country disgraced. Although Messrs. Hallory and Clayton deny that any action of the Senate can wipe this disgrace off, we must beg to differ. Let these officers be restored to their former positions, and then if any charges rest against them on the records of the Navy Department, let them be tried, and, if found guilty, condemned. But it is absurd to believe that 50 per cent. of the Navy has been for years inefficient, immoral, and worthless. And if 15 officers of the Navy decide that one-half are unfit for active service, it is more than probable that the other half are no better. The papers have already spoken in loud tones against the proceedings of the Board,

\* See *Scientific American*, Nov. 1855.

and will continue to issue their *anathema maranathas* until justice is done to these much injured officers. We ask by what rule was this Board selected? Did *they* pass the ordeal of a secret inquisition? Or have they since their appointment passed another 'careful examination' by a Board?"

Senators Davis and Mallory, prominent advocates of the original Bill establishing the Retiring Board, both strongly opposed Maury's reinstatement when a Bill praying for justice for those injured by the action of that Board was introduced into Congress. One afterwards became President of the Confederate States, and the other his Secretary of the Navy, and, both before and during the war, were inimical to Maury. At this time the following appeared in the *New York Herald* of December 15th, 1855.

"We learn that the Russian Minister yesterday waited on Lieutenant Maury, at the National Observatory, to deliver, by command of his Government, the following autograph letter from the Grand Duke Constantine, Commander-in-Chief of the Russian Navy:—

*To* LIEUTENANT MAURY.

SIR,

St. Petersburg, December 2nd, 1855.

It is now a long time since the eminent scientific works, for which navigators of every nation are indebted to your zeal and your talents, attracted my attention. . . . I should rejoice, sir, to present you with a testimonial of my esteem; but, knowing the laws of your country, which do not permit you to accept anything from foreign Princes, I must confine myself to the expression of my sentiments. They are as exalted as your own merits; and, in my official capacity, I may say to you that you do honour to the profession to which you belong, as well as to the great nation which you have the honour to serve. Receive, sir, the assurance of my goodwill and esteem.

CONSTANTINE.

"This is a high but deserved compliment to Lieutenant Maury, who has just been retired by the action of the late Retiring Board of the Navy. Maury has many powerful friends in the United States and abroad. The people of France, England, and Germany know more of such men as Maury, than they do of our most prominent politicians, and through such as Maury our country gains credit; his being retired has occasioned surprise and displeasure throughout the country. There will be a great deal said about it."

The *National Intelligencer* said:—"The conduct pursued by that Board in reference to Lieutenant Maury and the storm of indignant public feeling aroused by that action, has evidently reached the White House, and called forth 'special pleading' towards the public. The Secretary of the Navy evidently feels that injustice has been done to one of the noblest spirits in the navy—to a man whose name will hereafter be looked upon as a legacy which the whole country will delight to protect, and to which Science will turn as to one of her special favourites. . . . We commend the spirit in which the above sentiment is conceived, and we hope the assurance thus given to the public, of a willingness to rectify errors, will be carried out. In the case of Lieutenant Maury, all right-minded men, without respect to party, *have spoken* and unanimously said, 'Let his sword be restored to him with all the honour and reparation due to injured merit. Let this be done, and done quickly!'"

On March 25th, 1856, he addressed the following letter to each of three Secretaries of the Navy, who were at that time within his reach:—

SIR,

Observatory, Washington, March 26th, 1856.

Will you do me the favour to state why, when you were Secretary of the Navy, you did not order me to sea? Was it because I did not apply, or was it because you considered my services on shore of more value to the country

than they would have been at sea? I make this request in connection with the proceedings of the late Naval Board, and hope that in this circumstance you will excuse the liberty, and oblige,

Yours truly,

M. F. MAURY.

SIR,

Hillsboro', North Carolina, April 7th, 1856.

I regret that my absence from home has delayed a reply to your letter of the 26th ultimo so long after its receipt by my family. In answer to your inquiry, why you were not ordered to sea during my connection with the Navy Department, I have to state that I considered your services at the National Observatory of far more importance and value to the country and the Navy than any that could be rendered by an officer of your grade at sea in time of peace. Indeed, I doubt whether the triumphs of navigation and of the knowledge of the sea achieved under your superintendence of the Observatory will not contribute as much to an effective Naval Service and to the national fame as the brilliant trophies of our arms.

I remain, very respectfully, your obedient servant,

WILLIAM A. GRAHAM.

To Lieutenant M. F. MAURY,  
United States Navy, &c.

MY DEAR SIR,

Baltimore, March 28th, 1856.

I have received yours of the 26th, asking me to state why, when I was at the head of the Navy Department, I did not order you to sea. You ask further, was it because you did not apply, or because I considered your services on shore of more value to the country than they would have been at sea.

I have no recollection of your having applied for sea-service, though you may have done so, and I, after this lapse of time, have forgotten it. From my knowledge of the nature of your scientific pursuits, their usefulness to the country, and your devotion to them, I can say that nothing but such an emergency as left me no alternative, would have induced me to withdraw you from your labours at the Observatory by

an order to go to sea. My estimate of the importance of the scientific service required from the officers of the Navy is sufficiently manifested in my report to the President, in December 1852, upon the organization of a hydrographical corps, to be charged especially with such duties as those to which you have applied yourself with so much advantage to the country and to your own reputation. I still hope to see that subject attract the attention of Congress, and in the establishment of the corps to furnish an appropriate occasion to the Government to avail itself of your services under conditions equally conformable to your wishes and your deserts.

Very truly, my dear sir, yours,

JOHN P. KENNEDY.

To Lieutenant M. F. MAURY,  
United States Navy, &c.

DEAR SIR,

Smithfield, April 20th, 1856.

Your letter of 20th of March was received at my residence, during my absence from home on a visit of several weeks, and has, therefore, remained unanswered thus long. I sincerely regret the delay.

When I entered upon the duties of Secretary of the Navy, you were at the head of the Observatory at Washington as Superintendent. The post you occupied is one of the highest importance and interest to the Naval Service of the United States. Under an able and efficient administration of its duties, it has and will confer important benefits, not only on the Navy, but on the entire commercial interests of the country. It requires, however, that the Superintendent should possess the acquirements, habits, and tastes of the scholar and man of science, as well as those of the officer and seaman. I found you in the office, familiar with its duties, and fulfilling the duties assigned you with constantly increasing labour, enthusiasm, and success, in the midst of investigations and researches that then promised, as they have since conferred, great practical benefit on the service to which you belong, and lasting honour on the country and age in which you live. No imperative demand for sea-service



required your detachment from the Observatory, and on no duty either ashore or afloat could your services have been as valuable to the country or as distinguishing and honourable to your profession, as that to which you have been so assigned. With the highest consideration and regard,

I am your most obedient servant,

WM. BALLARD PRESTON.

To Lieutenant M. F. MAURY,  
Washington, D.C.

To ascertain the motives which actuated his brother officers in thus placing him under the ban of the Board, he wrote the following letter to each member of the aforesaid Board :—

SIR,

Observatory, 8th Nov., 1855.

On learning that I had been placed in official disgrace by the late Navy Board, of which you are a member, I addressed a communication to the Secretary of the Navy, requesting to be informed as to the nature of my alleged "incompetency," and the evidence of it. I learn, in reply, that the Board reported the names and rank of officers only, and gave no reasons for their action.

I therefore appeal to your sense of justice, and request that you will be so good as to answer, at your earliest convenience, the following questions, which are numbered for the convenience of your reply :—

1st. What was the process of examination adopted by the Board for ascertaining whether an officer was efficient or not ?

2nd. What was the standard of efficiency for the grade of Lieutenant ?

3rd. What difference, if any, did the Board, in weighing the efficiency of Lieutenants, make between duty ashore and duty afloat ?

4th. Wherein was I found *incapable of performing the duties of my office, rank, or grade* ?

5th. Did the Board inspect the Observatory, or make

any other examination as to the manner in which it is conducted?

6th. What was the character of the evidence upon which the Board pronounced its finding against me?

Should you have any objection to speak for the Board in reply to these interrogations, I hope you will have no objection to speak for yourself, and to answer them, at least so far as your own votes and action as a member of the Board are concerned.

Respectfully, &c.,

M. F. MAURY.

The answers to this letter were all either evasive, negative, or insulting.

To the Right Rev. Jas. H. Otey, D.D., Bishop of Tennessee, Maury wrote on the same subject as follows:—

MY DEAR FRIEND,

University of Va., 20th Sept., 1855.

You will learn from the enclosed, from one Navy officer to another, that I have, without cause, been made to suffer grievous wrong. The announcement will take you by surprise, as completely as it did me. I appeal to my friends to help me to right. I have been in the service, as you know, upwards of 30 years; during all that time no complaint of duty neglected, or accusation for any cause, had ever reached the Navy Department against me. In short, whatever my shortcomings may have been as a sinful man, as an officer, accountable only to his Government, my conduct has been without reproach; and yet I have been brought into official disgrace—for what? I am as ignorant as you. The thing has been done by a Board of Navy Officers, sitting in secret, and acting mischievously. I neither know what my offence is, nor who my accusers are. . . .

This monstrous inquisition was set up under the pretence of carrying out a law of the last Congress, *To promote the efficiency of the Navy*, which directed that a Board of Navy Officers should decide who the incompetent were, and that the President should then approve, or disapprove, of the finding of the Board. The law did not require this Board to sit in

secret, or to pronounce judgment; but in their secrecy they have adjudged me unworthy of promotion.

This Board was composed of fifteen officers, of whom ten were Captains or Commanders, none of whom had any scientific attainments—indeed, some of them have publicly contemned all science in the Navy. To this feeling—and a feeling of displeasure by no means uncommon to the old Commanders—that I, a Lieutenant, have dared to establish a reputation somewhat honourable in spite of them, I ascribe their finding. I have supposed that the value and the merits of an officer were to be determined to some extent by the fruits of his labour. . . . By this measure, not one of the ten Commanders, except Perry, has as yet made any mark upon the service that will be recognised as a reminder of their excellence when they are gone. And P., I am told, has never felt any satisfaction at my services at the Observatory, &c., but the contrary.

The excuse which they will offer for the slur they have cast upon me will be, I suppose, that I am lame. Mere bodily activity, in an officer of my rank, is comparatively of little value, when taken in connection with the mental activity. Officers are expected—at least, it is generally so in the upper grades—to work rather with the head than the hand, and, moreover, I am bodily as active as a majority of the Board, and if broken legs disqualify, at least one member of the Board should have borne me company, for his leg was broken twice over. . . .

General Scott is crippled in the arm, yet it does not appear to have unfitted him for the Army. Besides, this Board has left untouched other crippled officers, both above and below me. . .

I find, upon re-reading the above, that I have expressed myself strongly, but somewhat, if you were not very much my friend, egotistically. Therefore I hope you will pardon me for repeating the injunction as to the confidence of this writing. I wanted to put you in possession of all the circumstances of the case. . . .

Excuse me, my friend, and believe me to be, with affection,

Yours,

M. F. MAURY.

Extracts from a letter from one Navy officer to another on the subject of the action of the Retiring Board, in reference to Lieutenant M. F. Maury :—

DEAR —,

18th Sept., 1855.

. . . . You rightly infer that there is great excitement here about the action of the late Retiring Board ; lists confessedly and mischievously erroneous are in circulation, and from them no considerate opinion can be formed ; but I know, officially, the action in regard to M. F. Maury : it fills me with astonishment and indignation. I have all along been under the decided impression that the Board had not taken any such untoward course. Just now, on learning what had been done, I earnestly predicted to Mr. — my conviction that Maury will be immediately made a full *Captain*. He has *won* the highest honours of the profession, and should *wear* them.

It will be a great public wrong to have his eminent achievements and public works ignored in this way. The act is suicidal ! The great benefits he has conferred upon our Naval and Mercantile Marine, upon commerce, navigation, and science generally, are too well known and admired at home and abroad to tolerate even the appearance of putting down, or aside, such an officer.

I am bound to believe that the members of the Board acted under honest but mistaken convictions of duty and Naval policy. There can be no doubt, in my humble judgment, of Maury's *pre-eminent* capacity for command, ashore or afloat. Nor can the opinion be sensibly sustained that hydrographical should be *inactive* duty in the Navy, and that our organization should imitate the Army policy of little side-corps.

It is a grievous error, a large public wrong, to smother, if not suppress altogether, the Hydrographic Office of the Navy in this way.

I write hurriedly, but enough to show you where my heart and judgment are in this question. It is useless to say more now.

Yours truly,

---

To —, U. S. Navy,  
New York.

The following letter, from an officer of his own rank, will serve to illustrate the feeling in the Navy of officers who were not under the influence of jealousy. It was written after hearing that Maury had applied for sea-service during the Mexican War:—

*To LIEUTENANT M. F. MAURY, United States National  
Observatory.*

U. S. S. 'Saratoga,' off Vera Cruz,  
5th Feb., 1859.

MY DEAR SIR,

It was my thought and purpose to have written you this letter a year ago, just before leaving the country, at a time when rumours reached me of efforts being made to supersede you in the charge of the National Observatory; and now that I hear of the possibility or probability of your going to sea, I desire to place upon record my own feelings and humble opinion on that point.

Having been to sea on active service a very large portion of my life, I presume I attach as much importance to the merits and claims of sea-service as any one, having, in fact, but little claim to consideration on any other score, and knowing little about anything else but ships of war and their uses; but I conceive that the services rendered by you (in the great results obtained at the Observatory) to the service, to the country, and to the world at large, as so far surpassing, in their value and importance to mankind, anything you could possibly accomplish in the sea line of our profession, that it would be with extreme regret I should hear of your relinquishing the charge of that institution voluntarily, or by compulsion—sentiment, I am sure, which would be heartily responded to by scientific men at home and abroad.

For my estimate of your services I do not rely upon my own judgment or opinion, but upon the verdict of the world, literary and scientific, as I have read it in the journals, foreign and native, throughout Christendom.

I am thankful for the honour you have conferred upon my country and profession, with which I am identified as a citizen and member, and as an American I feel more proud

at this moment of the great achievements you have made in scientific research, and especially of the attractive and comprehensive manner in which you have presented them to the world (so that a plain man like myself can read as he runs), than of those of any man living, in whatever labours he may have been engaged, and I wish here, and now, to enter my humble protest against your resigning a post, for any consideration whatever, which you have distinguished by such extraordinary services.

I am here in the midst of a large fleet of foreign vessels of war, of many different nations, in daily intercourse with their officers, many of them highly accomplished and superior men, and I find, without exception, that our sentiments and views are in common upon this subject, for it is often discussed.

These remarks, in my judgment, are applicable to yourself alone, and to no other officer in our service; and it is solely upon the ground that you are performing more important services to the country, and to the profession, where you are, than you could do at sea, that I say, as a single individual member of that profession, I will, as far as I can, do your part of that work and fighting at sea, if you will continue to work as you have done for us on the land.

I hope the Government will keep you where you are while God spares your life and reason, and that the country will bestow upon you its highest honours, of which you are so justly deserving, whilst you advance in life and in the great work you have undertaken.

You cannot possibly mistake my motives in addressing you this letter, as there is no way on God's earth that you can serve me, and my acquaintance with you, for twenty years past, has been almost entirely interrupted, never having seen you on my many visits to Washington.

I beg you to be assured, my dear sir, of the very high respect with which I am,

Your obedient humble servant,

T. TURNER,

Commanding U. S. Ship *Saratoga*.

To show Maury's deep feeling on the subject, some extracts of letters written at that time to his kinsman and friend, B. F. Minor, of Albemarle, Virginia, are here subjoined :—

DEAR FRANK,

October 26th, 1855.

I am forging ahead slowly. The law says—"And whenever said board shall believe that said incompetency has arisen from any cause implying *sufficient* blame to justify it, he shall be dismissed," &c. Now there is —, who was tried for ignoble conduct, found guilty and sentenced to be cashiered; he has done nothing to retrieve himself since, and he too is on my list. I shall fight that point, and in the meantime ask leave to appeal, or state my case to the public and ask for a suspension of opinion till Congress can sit. . . . He had written a letter to each member of the Board requesting to "know the grounds on which they had acted, and their reasons for dropping him from the active list of the service and placing him in official disgrace." Most of the members wrote in reply; and he says, "The Board replies are coming in. I am waiting for them all. Last night I received two. M—— declines like a man, plump straightforward 'No!' 'Can't speak for the Board nor for myself,' yet volunteers to speak for the measure. 'The Board had nothing to do with its effect upon me of their action.'" Their replies will enable us to "peep into" their hearts. S——, P——, and B—— are also in town. They will probably reply soon; we shall see. . . .

Last night I received the enclosed two answers. B—— 'likes me,' and meant what he says for civility. I 'should be satisfied' with any amount of disgrace for '*full leave-of-absence pay*.' Nay, I should 'be grateful to the Board in that it was graciously pleased to place' me, &c., &c.

I am curious to see the replies of D——, B——, and G——. The former because I think they were moved by malice; the latter because I think better of him than his brother-officers generally do. Moreover, they are all away from town and have not a chance, or rather, so, a good chance, to get their cue from high places.

Again on November 15th, to the same, he wrote:—

As you see, by the replies of eleven out of the fifteen, they are not disposed to share the responsibility that attaches to them, or to enable one to right himself. By its proceedings the Board has outraged the public sentiment, mocked the law by indecent haste, and offended our sense of right.

Mr. Dobbin told me some time ago that I was mistaken in supposing that there was any feeling in the public mind upon the subject. . . . He moreover added that it was a mistake to suppose that Congress was going to undo the matter, for that Senators had conversed with him and pledged themselves to sustain the Board. He admitted that there were some officers, by supposition twelve or fifteen, that ought not to be ruled out, and ought to be put back, and asked me to advise with him as to the mode of getting them back. Speaking hypothetically, he put this case:—Suppose he and the President, consulting with the Senate, should satisfy Senators as to these twelve or fifteen cases; that Senators should agree to confirm the nominations, and that the President, then revoking twelve or fifteen commissions, should send in his blackballed nominations? My reply was, It was unlawful to promote blackballs, and that the President and Senate could not repeal a law. . . . I told him that mere promotion would not satisfy me; that the Board has cast a professional stain, and that that must be wiped out. He then suggested the idea of reassembling the Board to state reasons for their finding. I said that would be to aggravate the outrage, and I would not trust the Board!

I have not yet made up my mind as to my next step, or as to what I shall do with the Board replies. . . . I think I shall wait until some of my friends in Congress arrive, so that, seeing how the land lies there, I may take a fresh departure. I am much obliged to Baldwin and my good friends at the university about the professorship. I can't think of anything until I get right here. What wickedness has that Board not committed! It appears to me that my brother-officers, many of whom are men of intelligence, are



utterly mercenary; they think if I get *pay* that's everything. . . .

Regulations forbid me to appeal to the public. I have asked the Secretary to allow me, but he won't. G—— came to me yesterday with a confidential message from the Secretary that he and the President would use all their influence to have a hydrographic corps established for the Navy, with me at the head of it, backed by G. & M. et Al. . . . Of course I shall heed no overtures until I find out, and have it published, wherefore I am blackballed.

You ask about the feelings of those who are retained on the active list. *They* are inaugurating a move to make Commander Steward an Admiral, and me a Captain. The plan is to get up a Navy petition. When waited upon yesterday to be advised of this move, my reply was—"I am profoundly sensible of the compliment; but all the sheep-skins that the department could issue could not buy me off from my efforts to wipe out the stain that this mischievous, wicked Board has made." "Of course not," was the reply; "but you don't object to the move?" "No." . . .

There were members of that Board, I am told, who behaved like hungry wolves and shocked others by the display of savage emmity.

It's a wicked Board to distract my attention from useful work and concentrate it on these miserable controversies, &c., &c. . . .

It suffices to add that the vindication so persistently demanded was in a short time abundantly attained. During the following winter the action of the Naval Retiring Board was virtually set aside by Congress, and by special Act Maury was reinstated and promoted to the rank of Commander with back pay from the date of his retirement. The letter from the Secretary of the Navy announcing this officially has been lost, but Maury's reply thereto is herewith appended:—

SIR,

U. S. Naval Observatory, 4th February, 1858.

I have the honour to acknowledge the receipt of your communication of the 29th ultimo, enclosing a commission making me a Commander in the Navy from the 14th day of September, 1855.

Respectfully, &c.,

M. F. MAURY, Commander U.S.N.

To Hon. ISAAC TONCEY,

Secretary of the Navy.

## CHAPTER IX.

Publications in the periodical press while at the Observatory—Observations of the rise and fall of the Mississippi—"Drowned Lands"—Steam Navigation to China—Ship-canal schemes—"Inca Papers"—Their defence in a letter to Mrs. Blackford.

WHILE engaged on those labours at the Washington Observatory which will immortalize his name, Maury frequently ventilated his ideas and the results of his ripe experience in periodical literature.

In 1843 he wrote on the subject of "Lighthouses on the Florida and Gulf Coasts," and showed just where they ought to be placed. In another paper, in the same year, he begged that a competent officer of the navy might be sent to Memphis, or elsewhere on the Mississippi River, to make systematic observations on the rise and fall of the water in that river and its tributaries. For this purpose Lieutenant Marr was selected, and directed by Maury to make an accurate cross-section of the river opposite to the navy-yard, and to observe for 365 consecutive days the velocity of the current near the surface and bottom, for the purpose of ascertaining the volume of water passing that point daily; also to take daily a measured quantity of water, evaporate it, and note the amount of silt or solid matter it contained.

He was to observe daily the temperature of the air and water, the amount of evaporation and precipitation. The first year the continuity of the series was broken, and he had to begin again and go over the work, so as to have a complete series of observations for one year. These observations, patiently and carefully made and afterwards digested by

Maury, formed the foundation of all that subsequent research has revealed of the habits of our greatest river.\* The War Department afterwards ordered additional observations to be made, which were elaborately discussed by General Humphries.

Maury also originated the plan of establishing water-marks or river-gauges at all the principal towns on the Mississippi, and its branches, in order that captains of steamboats and others interested "might every day be accurately informed through the telegraph what stage of water might be found in any of the tributaries." "It is believed that a record of these river-gauges, properly kept, would enable intelligent observers to determine the effect upon the stream below of a freshet in any tributary, or set of tributaries."

His papers on "The Defence of the Lakes and the West," and his advocacy of the Illinois and Michigan ship-canal as a measure of national defence, created a profound impression, particularly in the North-West, and were received with enthusiastic commendation. These papers were spread upon the journals of the legislature of Illinois, with a vote of thanks to the author.

When Congress had under consideration the cession of the "Drowned Lands" (belonging to the Government) along the Mississippi River to the several States in which they lay, Maury, at the request of one of the Senate Committee (J. H. Borland) having charge of the subject, prepared an elaborate Report and a Bill, providing that the States should proceed to redeem these lands according to a common plan to be matured by competent engineers selected for the purpose by the general government. "It has since become evident that, had this been carried out, immense advantage would have been gained, and enormous loss and damage avoided," says the *Memphis Eagle and Enquirer*.

\* *Memphis Appeal*.

In April 1842 he published a letter\* to the Hon. T. Butler King about "Steam Navigation to China," recommending his "great-circle route," which would take in the Fox Islands, and advising that coaling-stations should be established there. "You know," he said, "that the shortest distance between two points on a plane or flat surface is a straight line; so the shortest distance between two points on the surface of a globe or sphere is a section of a great circle, or a circle which has for its centre the centre of the globe or sphere. Such a curved line is the one I recommend as the shortest route between our Pacific shores and China."

He urged the building of a ship-canal and railroad across the isthmus to the Pacific, and showed the advantages possessed by Panama only forty-five miles across, or Nicaragua, over Tehuantepec, which is three times that distance, and has besides no harbour.† The expense of a ship-canal across the Isthmus of Panama has been estimated by European engineers at \$25,000,000. The summit to be overcome is 275 or 280 feet above the level of the sea. The river Chagres is navigable only for small vessels a part of the year, and for a part of the way across the isthmus, which here is about forty-five miles broad. A railway is already in process of construction. A canal across Tehuantepec is out of the question; there are difficulties both of the land and water which make it impracticable. It is useless therefore to discuss the hypothetical advantages of this route.

I am not in possession at present of the information necessary to speak of a canal by the Nicaraguan route, although it offers advantages which are very inviting. There are valuable letters on this subject on file at the

\* In the *S. L. M.*

† See *National Intelligencer*, Nov. 4th, 1849, Maury on "Communication with the Pacific."

National Observatory; also letters about two lines of railroad through the United States to the Pacific—"One should be through the North-West, the other through Texas." Copies of these, or of others on many subjects of national interest, can be obtained by reference to Lieutenant Maury's official letter-books at the National Observatory.

In consequence of these and other writings, the Navy Department sent Lieutenant Strain and several other naval officers, engineer John Minor Maury (a young relative of Lieutenant Maury's) being of the party, on the celebrated but ill-fated Darien Exploring Expedition, which, owing to defective maps and bad guides, proved a most disastrous one.

After untold privations from hunger and other causes, and the loss of several lives, they reached the other side; but for the last two weeks they were out "Jack Maury" was the only one who had strength left to carry a shot-gun. He kept the whole party alive by his devoted exertions.\*

In 1845, Maury read a paper before the Virginia Commercial Convention on the "Commercial Prospects of the South." In it he says:—"Geographically speaking, Norfolk is in a position to command the business of the Atlantic seaboard. It is midway between the coasts, has a back country of surpassing fertility, of great capacity and resources. The waters which flow past Norfolk into the sea divide the producing from the consuming States of the Atlantic slope, the agricultural from the manufacturing; and these same waters at this one place form the natural channels that lead from the most famous regions of the country for corn, wheat, and tobacco, to the great commercial marts.

"Virginia saw these advantages some ten years ago and slept upon them. She sees that Nature has placed them

\* See Headley's "Darien Expedition," published in Franklin Symond series.

there, and made them hers. She never dreamed that man could take them away; but man has. . . .

"But Great Britain and Europe are not the only countries in the world with which commercial intercourse is desirable. Let the South look to the South! Behold the valley of the Amazon!\* In 1837 commenced the second era of ocean steam navigation, though twenty years before that the South had sent out an *avant-courier* from Georgia; but the South rested content with the honour of being the first to stride across the Atlantic under steam. This was the time (1837) when the idea was thrown out 'that Virginia should offer to co-operate with the French and invite them to send their steamers to her.'"

In 1850, he suggested, in his Inca Papers, that the valley of the Amazon should be used as an outlet and safety-valve for the surplus black and other population of the South. In consequence of this paper and two others which he wrote for the *Southern Literary Messenger* over the signature of "Harry Bluff," on "Our Relations with England" and the "Right of Search," his favourite cousin, Mrs. Blackford, to whom he was much attached, wrote him a long letter to which the following is a reply:—

MY DEAR COUSIN,

Observatory, 24th Dec., 1851.

I received your letter yesterday, and was grieved that any of my writings should give you pain. Do you recollect the ride we took together many years ago, you on your little black pony Rosabel, and I on my darling Fanny, that I rode on from Tennessee? It was on the road that leads from Fredericksburg to Spottsylvania Court House; time, the month of May 1825. We had much talk as to my calling in life. You took an interest in my welfare, spoke kindly to me, and gave me good advice, which went straight to my heart, sank deep, and made me love you dearly. . . .

\* See "Valley of the Amazon," by "Inca" (M. F. M.), 1850.

No, my dear cousin, I am not seeking to make slave territory out of free, or to introduce slavery where there is none. Brazil is as much of a slave country as Virginia, and the valley of the Amazon is Brazilian.

I am sure you would rejoice to see the people of Virginia rise up to-morrow and say, from and after a future day—say 1st January, 1855—there shall be neither slavery nor involuntary servitude in Virginia. Although this would not strike the shackle from off a single arm, nor command a single slave to go free, yet it would relieve our own loved Virginia of that curse. Such an act on the part of the State would cause slave-owners generally either to leave the State with their slaves, or to send them off to the Southern markets.\* But they would be still slaves in your own country. . . . We must take things as we find them, and if we would be practical and do good, we must deal with mankind as they are, and not as we would have them. . . .

If you will read my article published in the *Southern Literary Messenger* against the "Right of Search," which article was sent in the proof-sheets to Lord Ashburton, and commended to him as containing a plan which if carried out would be most effective in breaking up the slave-trade. . . . You will see that my plan was adopted exactly as I proposed it, and we have now a squadron on the coast of Africa for the suppression of the slave-trade.

. . . . Now for the last two years I have been urging upon the Government to make a treaty with Brazil, and to remind her in that treaty that we are her best customers for coffee; that nearly all she produces is consumed in the United States, where it is admitted duty free, and of course the consumption is largely increased thereby. I have urged that we should say to Brazil in that treaty, Stop the African slave-trade, or we will put a duty on that coffee, and thus lessen the demand for the fruits of slave labour, and so take away from you the interest in the Tariff Act. . . . Brazil is a slave country, and all the travellers who go there, I am told, say

\* As the Yankees did early in this century, when they ceased to be profitable north of 39° 30'.



that the black man, and he alone, is capable of subduing the forests there. To make it clear that the people of Amazonia will have slaves—they are very near to the coast of Africa, and if they cannot get them in one way they will in another. The alternative is, shall Amazonia be supplied with this class from the United States or from Africa? In the former case it will be a transfer of the place of servitude, but the making of no new slaves. In the latter it will be making slaves of free men, and adding greatly to the number of slaves in the world. In the former it would be relieving our own country of the slaves, it would be hastening the time of our deliverance, and it would be putting off indefinitely the horrors of that war of races which, without an escape, is surely to come upon us. Therefore I see in the slave territory of the Amazon the safety-valve of the Southern States.

I cannot be blind to what I see going on here. It is coming to be a matter of faith among leading southern men that the time is rapidly approaching when, in order to prevent this war of races and its horrors, they will, in self-defence, be compelled to conquer parts of Mexico and Central America, and make slave territory of that which is now free.

Am I not right? Am I not humane when, insomuch as I see these tendencies, I try to prevent them by substituting a lesser for a greater evil? And though I cannot do all the good that I would, may I not be permitted, in my humble way, to prevent harm?

How glorious is Lewis Herndon's mission into that valley in comparison with the achievements of Clive and Warren Hastings!

I may be wrong in preaching up Amazonia; but I am, my dear cousin, as firm in my convictions of right as you are when you enter your closet and shut the door to pray, and may God help us both!

Your affectionate cousin,

M. F. MAURY.

## CHAPTER X.

Exploration of the Amazon by Captain Herndon—Loss of the 'Central America'—Maury's official report of the shipwreck, and the death of her gallant commander—Monument to Herndon at Annapolis—Maury's Steam Lanes—Present of \$5000 and a service of plate from the merchants and underwriters of New York—Part of an address to the University of Virginia.

IN consequence of his Inca Papers, and because of Maury's urgency on the subject, the Navy Department organized an exploring expedition for the Amazon and its tributaries, and placed it under the command of Lieutenant William Lewis Herndon, U.S.N., who on his return from South America wrote a most instructive and valuable book, entitled 'The Amazon.'

This gallant officer, whom Maury loved with a love "passing that of woman," went down with his ship, the unfortunate 'Central America,' in a storm off Cape Hatteras in 1857.

He lost his life in his devotion to duty, and while saving the women and children and passengers entrusted to his care. Maury being ordered by the Secretary of the Navy to prepare a report of the loss of this brave officer and his ship, wrote as follows :—

U. S. National Observatory, Washington, D.C.,

SIR,

Oct. 19th, 1857.

On the 12th day of Sept. last, at sea, the U. S. mail steamship, 'Central America,' with the California mails, many of the passengers and crew, and a large amount of treasure on board, foundered in a gale of wind.

The law requires the vessels of this line to be commanded

by officers of the Navy, and Commander William Lewis Herndon had this one. He went down with his ship, leaving a glowing example of devotion to duty, Christian conduct, and true heroism.

All hopes of his having been picked up by some passing vessel have vanished. The survivors of the wreck have made their statements of the gale, the sinking of the ship, and their rescue. These have gone the rounds of the newspaper press, and we are probably possessed of all the particulars concerning that awful catastrophe that the public will ever know.

The department has already been informed officially of this wreck and disaster—how nobly Herndon stood to his post and gloriously perished—how the women and children were all saved, and how he did all that man could do, or officer should, to save his ship and crew also. But the particulars have been given to the department only in the perishable form of the newspaper records.

As a tribute to his memory, as material for history, as an heirloom in the navy, and a legacy to his country, I desire to place on record in the department this simple writing as a memorial of him.

We were intimates; I have known him from his boyhood; he was my kinsman and my wife's brother. The ties of consanguinity, as well as our professional avocations, brought us frequently and much together; we were close friends.

Under these circumstances, I ask your leave to file a report of that gale and his loss. I am to embody in it a simple narrative of incident derived from statements which the survivors from the wreck have made either publicly, through the prints of the day, or privately to his family and friends. These incidents, in the silent influence of the lessons they teach, constitute an inheritance of rare value to his countrymen; they are the heirlooms of which I spoke, and will, I am persuaded, be productive of much good to the service. The 'Central America,' at the time of her loss, was bound from Aspinwall, viâ Havana to New York. She had on board, as nearly as has been ascertained, about two millions

in gold, and 474 passengers, besides a crew, all told, of 101 souls—total, 575.

She touched at Havana on the 7th Sept. last, and put to sea again at nine o'clock on the morning of the 8th. The ship was apparently in good order, the time seemed propitious, and all hands were in fine health and spirits, for the prospects of a safe and speedy passage home were very cheering. The breeze was from the trade winds quarter at N.E.; but at midnight on the 9th it freshened to a gale, which continued to increase till the forenoon of Friday, Sept. 11th, when it blew with great violence from N.N.E.

Up to this time the ship behaved admirably; nothing had occurred worthy of note, or in any way calculated to excite suspicions of her prowess, until the forenoon of that day, when it was discovered that she had sprung a leak. The sea was running high; the ship was very much heeled over on her starboard side, and laboured heavily; the leak was so large, that by 1 P.M. the water had risen high enough to extinguish the fires on one side, and stop the engine.

Baling gangs were set to work—the passengers cheerfully assisting—and all hands were sent over on the windward side to trim ship. Being relieved, in a measure, she righted, and the fires were relighted; but there was a very heavy sea on, and, in spite of pumps and baling gangs with their buckets, whips, and barrels, the water gained upon them, until it reached the furnaces and extinguished the fires again, never to be rekindled. This was Friday.

The ship was now at the mercy of the waves, and was wallowing in the trough of the sea like a log. She was a side-wheel steamer, with not a little top hamper, and therefore an ugly thing to manage in such a situation. The storm-spencer had been blown away, and the fore-yard was cut down during the night. Attempts were made to get the ship before the wind, but no canvas was stout enough to stand the raging of the storm. After the head-sails had been blown away, the Captain ordered the clews of the fore-sail to be lashed down to the deck, thinking to hoist the yard up only a little way, show canvas, and get her off; but by the time the yard was well clear of the bulwarks, the sail was taken

right out of the bolt ropes, so great was the force of the wind, and such the fury of the gale.

The fore-mast was then cut away; the fore-yard was converted into a drag and got overboard; bits of canvas also were spread in the rigging aft, hoping by these expedients, as a last resort, to bring the ship head to wind; but all to no purpose—she refused to come.

Crew and passengers worked manfully, pumping and baling all Friday afternoon and night, and when day dawned upon them, the violence of the storm was still increasing.

All that energy, professional skill, and seamanship could do to weather the storm and save the ship had been done. The tempest was still raging, resources were exhausted, the working parties were fagged out, and the Captain foresaw that his ship must go down.

Still there was some cause for hope: he might save life, even if he lost ship, mails, and treasure. He was in a frequented part of the ocean, and a passing vessel might come to the rescue of crew and passengers if they could manage to keep the ship afloat till the gale abated. He encouraged them with this hope, and asked for a rally. They responded with cheers. The lady passengers also offered to help, and the men went to work with a will, whipping up water by the barrellful to the steady measure of the sailors' working song.

The flag was hoisted union down, that every vessel as she hove in sight might know they were in distress and wanted help.

Under this rally of crew and passengers they gained on the water for a little while; but they were worn out with the trial of the last night and day—they had not the strength to keep it under.

Finally, about noon of Saturday the 12th, the gale began to abate and the sky to brighten. A vessel hove in sight, saw the signal of distress, ran down to the steamer, was hailed, answered, and was asked for help; she could give none, and kept on her course.

At about 2 P.M. the brig 'Marine,' Captain Burt, of Boston, bound from the West Indies to N. Y., heard minute-guns, and

saw the steamer's signals of distress. She ran down to the sinking ship, and though very much crippled herself by the gale, promised to lay by. She passed under the steamer's stern, spoke, rounded to, and kept her word.

The steamer's boats were ordered to be lowered—the 'Marine' had none that could live in such a sea.

Now came another trying time: the boat-scenes of the steamer 'Arctic' had made a deep impression upon Herndon's mind; they now crowded into remembrance. Who of his crew should be selected to man the boats? Would they desert him when they got off from the ship in the boats? There were some who he knew would not.

It was not an occasion when the word might be passed for volunteers; for it was the post of safety, not of danger, but nevertheless of great trust, that was to be filled. The Captain wanted trusty men. The crew of such a vessel is not very permanent as to its *personnel*, therefore he felt at a loss, for there was still a man wanting for Black—the boatswain's boat. A sailor, perceiving the Captain's dilemma, stepped up and modestly offered to go.

He had not, it may be supposed, been long in the ship, for Herndon evidently did not know him well, and replied, in his mild and gentle way, "I wonder if I can trust you?"

The sailor instinctively understood this call for a shibboleth, and simply said: "I have hands that are hard to row, and a heart that is soft to feel." This was enough. He went, and was true; not a boat deserted that ship.

All the women and children were first sent to the brig, and every one arrived there in safety. Each boat made two loads to the brig, carrying in all 100 persons.

By this time night was setting in. The brig had drifted to leeward, several miles away from the steamer, and was so crippled that she could not beat up to her again.

Black's (the boatswain) boat alone returned the second time. Her gallant crew had been buffeting with the storm for two days and nights without rest, and with little or no food. The boat itself had been badly stove while alongside with the last load of passengers. She was so much knocked to pieces as to be really unserviceable, nor could she have

held another person. Still those brave seamen, inspired by the conduct and true to the trust reposed in them by their Captain, did not hesitate to leave the brig again, and pull back through the dark for miles, across an angry sea, that they might join him in his sinking ship, and take their chances with the rest.

Let us not call this rash, idle, or vain ; it was conduct the most loyal, noble, and true. The names of this brave crew have not been given ; otherwise I would suggest the propriety of making some formal acknowledgment of the high appreciation in which such devotion to duty and such conduct are held by the department.

During the lowering of the boats and the embarkation of the women and children, there was as much discipline preserved among the crew of that ship, and as much order observed among her passengers, as was ever witnessed on board the best-regulated man-of-war.

The law requires every commander in the navy to show in himself a good example of virtue and patriotism ; and never was example more nobly set forth or beautifully followed. Captain Herndon, by those noble traits which have so endeared his memory to the hearts of his countrymen, had won the respect and admiration of the crew and passengers of that ship in such a degree as to acquire an influence over them that was marvellous in its effects. The women felt its force. Calm and resolute themselves, they encouraged and cheered the men at the pumps and in the gangways ; and finally, to Herndon's last appeal for one more effort, they rose superior to their sex, and proposed to go on the deck themselves, and, with fair hands and feeble arms, do man's work in battling with the tempest.

There were many touching incidents of the most heroic personal devotion to duty, and to him, during that terrific storm. Even after the ship had gone down and the men were left in the water, clinging to whatever they could lay hands on, offices of knightly courtesy were passed among them.

As one of the last boats was about to leave the ship, her commander gave his watch to a passenger with the request that it might be delivered to his wife. He wished to charge

him with a message for her also, but his utterance was choked. "Tell her——." Unable to proceed, he bent down his head and buried his face in his hands for a moment as if in prayer, for he was a devout man and a Christian.

In that moment, brief as it was, he endured the great agony; but it was over now. His crowning thoughts no doubt had been of friends and home—a beloved wife and lovely daughter\* dependent upon him alone for support. God and his country would care for them now. He had resolved to go down with his ship.

Calm and collected, he rose up from that short but mighty struggle with renewed vigour, and went with encouraging looks about the duties of the ship as before. He ordered the hurricane-deck to be cut away and rafts to be made. The life-preservers were also brought up and distributed to all who would wear them. Night was setting in, and he directed Frazer, the second officer, to take charge of the arm-chest and send up a rocket every half-hour.

Van Rennselaer, his first officer, was also by him. Herndon has spoken of him to me in terms of esteem and admiration, and Van Rennselaer proved himself worthy of the last of these commendations.

Side by side they stood at their post, and perished together with their harness on.

After the boat which bore Mr. Payne—to whom Herndon had entrusted his watch—had shoved off, the Captain went to his state-room and put on his uniform. The gold band around his cap was concealed by the oil-silk covering which he usually wore over it. He took the covering off, and threw it on the floor; then, walking out, he took his stand on the wheel-house, holding on to the iron railing with his left hand. A rocket was set off, the ship fetched her last lurch, and as she went down he uncovered.

A cry arose from the sea, but not from his lips. The waves had closed about him, and the curtain of night was drawn over one of the most sublime moral spectacles that the sea ever saw.

\* This daughter became the wife of Chester R. Arthur, subsequently President of the United States.



Just before the steamer went down, a row-boat was heard approaching. Herndon hailed her; it was the boatswain's boat, rowed by "hard hands and gentle hearts," returning from on board the brig to report her disabled condition. If she came alongside she would be engulfed with the sinking ship. Herndon ordered her to keep off. She did so, and was saved. This, so far as I have been able to learn, was his last order. Forgetful of self, mindful of others, his life was beautiful to the last, and in his death he has added a new glory to the annals of the sea.

Forty-nine of the passengers and crew were picked up, floating on the water that night and the next morning, by the Norwegian bark 'Ellen,' and brought safely into Norfolk. On the ninth day after the wreck, the English brig 'Mary' picked up three others, who had drifted about 450 miles with the Gulf Stream. Total saved, 152.

It does not appear certain that Captain Herndon was seen or heard after the ship went down, by any of those who survived the wreck. Mr. Childs, one of the passengers, thinks he conversed with him in the water only a little while before he himself was picked up; but Herndon was small of stature, of delicate frame and constitution, and by no means in robust health. He was already suffering from the incessant labour and exposure of the last two days and that long Friday night. His fatigue must have been great, and when the waves closed over his ship he was in all probability too much exhausted to struggle.

Everything that could be done by the best sea-captain to save his ship was done to save this one. Brave hearts and strong arms were on board. There was no lack of skill or of courage. Order and discipline were preserved to the last; and she went down under conduct that fills the heart with unutterable admiration.

Herndon was in the forty-fourth year of his age. He was born in Fredericksburg, Va. He was the son of the late Dabney Herndon of that place, and was the fifth of seven children—five sons and two daughters, of whom Mrs. Maury is the elder. Lewis Herndon was left early an orphan, and entered the navy at the age of fifteen. Affectionate in

disposition, soft and gentle in his manners, he won the love and esteem of his associates, and became a favourite throughout the service. None knew him better or loved him more than,

Respectfully,

M. F. MAURY, Lieutenant U.S.N.

To Hon. ISAAC TONCEY,  
Secretary of the Navy,  
Washington.

There is a handsome monument erected to his memory in the parade-ground of the Naval School at Annapolis, Md., on which is recorded the manner of his death, to the end that the future heroes of our service may read thereof and do likewise.

In 1855 Maury published a chart with two lanes laid down, each 25 miles broad, for the use of steamers in going and returning across the Atlantic, by following which they avoid the danger of the frequent collisions which were then taking place with other steamers, sailing-vessels, and icebergs, particularly amid the dense fogs which hang perpetually over the Banks of Newfoundland.

The *Montgomery Advertiser and Gazette*, of May 20th, 1855, thus noticed the new chart:—

"This present enterprise is to suggest a method by which collisions between steamers plying between this country and Europe may be avoided.

"To accomplish this, Lieutenant Maury proposes a double track, and lays down a sailing route, or routes, by which it can be done. 'If steamers,' says Maury, 'would agree to follow two such routes, I think that I could lay them off so as to have them quite separate, except at the two ends, without materially lengthening the passage either way.'

"Circulars have been sent out with a view to gain the object contemplated. We agree with Professor De Bow's

view—that Lieutenant Maury is certainly entitled to the rank of one of the greatest public benefactors of the age.”\*

These charts were generally adopted by the larger steamship companies, and in consequence of their satisfaction therewith, and the shortening of the routes everywhere by Maury's Sailing Directions and Wind and Current Charts, he was presented by the merchants and underwriters of New York with \$5000 in gold and a handsome service of silver. This was in 1855.

In the same year, Maury delivered an address before the literary societies at the University of Virginia, of which the following are extracts:—

“In entering upon your duties as a citizen, recollect your excellent training here: it has given you many advantages; therefore, do not neglect to lay down rules of conduct by which they may be most improved.

“Whatever may be the degree of success that I have met with in life, I attribute it, in a great measure, to the adoption of such rules. One was, never to let the mind be idle for the want of useful occupation, but always to have in reserve subjects of thought or study for the leisure moments and the quiet hours of the night. When you read a book, let it be with the view to special information.

“The habits of mind to be thus attained are good, and the information useful.

“It is surprising how difficult one who attempts to follow this rule finds it at first to provide himself with subjects for thought—to think of something that he does not know. In our ignorance our horizon is very contracted: mists, clouds, and darkness hang upon it, and self fills almost the entire

\* See ‘*Ville du Havre*’ disaster in 1874. The *London Times*, in speaking of the loss of this ship remarked—“If she had followed Maury's steam lanes, this terrible loss of life and ship would have been avoided.”

view around, above, and below to the utmost verge. But as we study the laws of nature, and begin to understand about our own ignorance, we find light breaking through, the horizon expanding, and self getting smaller and smaller.

"It is like climbing a mountain: every fact or fresh discovery is a step upward with an enlargement of the view, until the unknown and the mysterious become boundless—self infinitely small; and then the conviction comes upon us with a mighty force, that we know nothing—that human knowledge is only a longing desire.

"The impression is very common, that when a young man leaves college he has finished his education; but do not, when you return home, crowned with the honours of these schools though you be, give in to this notion even for a moment; it is another of those mischievous popular fallacies that you should guard against. Here you have been disciplining the mind, training the thoughts, and laying off the fields in which they may be usefully employed. You have finished nothing here; you have only been clearing away rubbish and preparing the foundations; and notwithstanding that you have been under the eyes of the best masters, and have laid your foundations of the best materials and in the most scholarly manner, yet, like the foundations for any other superstructure, unless built upon, they will soon grow weak and be frittered away.

"If you cease to study now, you will soon forget all you have learned here.

"Movement, progress, is a law of the physical world; here rest and decay are correlative terms. The stars cannot stand still and keep their places; a planet by going back would be hurled into destruction, and even the plant of the earth that ceases to grow straightway withers and dies. And so it is in the moral world: the progress of man must be upwards and onward, or downward and backward. His mind cannot

stand still. There is no such thing as a stationary condition for the human understanding. To stand still is death; to go backwards is worse.

“With the advantages of the good training which you have received here, you cannot go amiss for subjects of study and improvement. The rock at your feet, the plant in every walk you tread, the air that surrounds you, the insect that flits across your path, the stars that look down upon you, are all suggestive of knowledge. They abound in subjects which it is good for clear heads and sound minds to study and investigate.

“When the Spirit of God first moved on the face of the waters, the physical forces that produce the works of nature were brought into play. The wonders, the harmonies, and the beauties of creation are but the display of these forces. As exhibited in the aspects of nature, they are never-ceasingly instructive. In the silent hours of the night you may learn excellent lessons from them by watching the ‘hosts of heaven.’ I sometimes do this through the telescope; and of all the wonders and beauties that are revealed by this instrument, the simple passage of a star across the meridian is to me the most grand and imposing: it is exquisite—it is sublime! At the dead of night, when the noise of the city is hushed in sleep, and all is still, I sometimes go over alone to the Observatory to revel in this glorious spectacle. The assistants, wearied with watching, have retired to rest, and there is not a sound to be heard in the building save the dead-beat escapement of the clock, telling the footsteps of time in his ceaseless round. I take up the ephemeris, and find, by calculation made years ago, that a star which I have never seen will, when the hand of that clock points to a certain instant of time, enter the field of the telescope, flit across the meridian, and disappear. The instrument is set, and as the moment draws near, the

stillness becomes more and more impressive. At last I look—it is glorious! A pure bright star is marching through the field to the music of the spheres; and at the very instant predicted, even to the fraction of a second, it stalks across the wire and is gone. The song that was sung by the morning stars has been felt, and the heart, swelling with emotions too deep for the organs of speech, almost bursts with the unutterable anthem.

“The machinery by which the forces of the universe are regulated and controlled is exquisite; and if it be instructive to study the mechanism of a watch, or profitable to understand the principles of the steam-engine, the contrivances of man’s puny intellect, how much more profitable and instructive must it be to look out upon the broad face of nature and study that machinery which was planned and arranged in the perfection of wisdom:

“If you be at first a little sceptical as to this order and arrangement, taking the harmonies of nature for discord, you will soon feel satisfied that the machinery of the universe—that mechanism which gives nature her powers to act—is, in all its parts, the expression of one thought, as much so as the works of a watch are of one design; that the same hand which weighed the earth and gave gravitation its force, adjusted the fibres of the little snowdrop and proportioned their strength.

“The forces displayed in the blade of grass, in the wing of the bird, and in the flaming path of the comet as it whirls around the sun, are all adjusted with equal nicety and care. Chance has nothing to do with the works of nature; yet there are many of her operations which, upon partial study only, do look like the results of accident. Botanists tell us of some: they say that certain plants have not the power of scattering their pollen—it is glutinous, and will not fly with the wind—but as the insects come to suck the flower it adheres to them;

they, lighting on other blossoms, deposit it there in the right place for germination; nay, students of these things go so far as to say that the fig-crop of Smyrna, which alone supports thousands of human beings, could not be brought forth if a certain little insect were to fail, regularly and at the right time, to perform certain offices for this plant. But are not insects as well as plants agents and instruments of the Creator? Have they not their appointed offices to perform in the economy of the universe? And has the insect any more ability to resist the power of instinct than a good seed in good ground has to resist the forces of germination?

“In studying the works of nature, therefore, discard the idea that they are the results of chance or accident. In the mind of the truth-loving, knowledge-seeking student, the coming of the gall-fly in due season to minister to the fig-tree of Smyrna and make it bear fruit for hungry thousands, is no more the work of chance than it was by chance that the raven carried ‘bread and flesh in the morning, and bread and flesh in the evening, to the prophet at the brook.’”

## CHAPTER XI.

Maury's personal appearance and manners—Life in his family—The way he wrote his books—How he dressed in the morning—The nick-names he gave his children—How he taught his daughters round the breakfast-table—The borrowed book—The brass telescope—The trip to Europe and visit at Wrottesley Hall.

THE personal appearance and habits of Commander Maury will have an interest for those who value his life-work and venerate his memory. Maury was a stout man, and about five feet six inches in height; he had a fresh, ruddy complexion, with curling brown hair, and clear, tender blue eyes. His massive head and strong neck surmounted broad and square shoulders, and a chest deep and full. His arms were long and strong, with hands small, soft, and beautifully formed—he was apt to use them in graceful gestures while conversing.

Every feature and lineament of his bright countenance bespoke intellect, kindness, and force of character. His fine blue eyes beamed from under his broad forehead with thought and emotion, while his flexible mouth smiled with the pleasure of imparting to others the ideas which were ever welling up in his active brain. In early manhood his head was well covered with fine soft, wavy brown hair, which became thin before he reached middle age. Latterly, he was quite bald, as is shown in Valentine's fine bust, taken when he was sixty years old.

His conversation was enjoyed by all who ever met him; he listened and learned while he conversed, and adapted himself to every capacity. He especially delighted in the



company of young people, to whom his playful humour and gentle consideration made him very winning.

In early youth he was careless in his dress, and expressed contempt for those who judged of a man by his outward appearance. "But," he said, "I soon perceived the folly of this carelessness;" and in later years he became scrupulously neat in his attire. His enjoyment of the pleasures of the table was refined: he liked good wine; he carved well, and entertained generously; and he was never more genial, humorous, or interesting, than when surrounded by friends about a well-served board.

N. P. Willis, of the *Home Journal*, said to a friend, speaking of Maury, after travelling with him out West for four or five days:—

"He made me subject to his personal magnetism, and while with him I had secretly vowed myself and my pen to the service of his interests and reputation thenceforward. . . . During the time that we were together on that trip, he was, unconsciously to himself, to me an exquisitely interesting study of character. I had long heard of him, and knew what the public generally knew of his pursuits; but my conviction was strengthened every day that he was greatly undervalued by common repute, and that he was of a far deeper intellect, and much more of a natural philosopher, than the world, with all his repute, gave him credit for. . . . Under his exceeding modesty and reserve, there seemed to be a vein of the *heroic* and romantic so hidden, that he was seemingly unconscious of it, and I was quite sure before I parted with him that he was one of the *sans peur et sans reproche* class of men; yet willing to pass for only the industrious man of science which the world takes him for. Under the strong magnetism of his sincere and simple manner, I formed an irresistible attachment to him, and longed to set the world right as to his qualities."

One of his daughters says :—" When I can first remember him he walked with a limp, although without a cane, and his locks had become few." In manner he was most affable and courteous ; in conversation he was always evolving great ideas—as Mr. Calhoun said of him, " He was a man of great thoughts," and, when not conversing, he was either writing or walking up and down the room as on a quarter-deck, studying out some problem to be soon placed before the world for its good.

But whether writing or thinking, no noise of the children, no invasion of visitors, was ever an interruption. In the midst of his most interesting pursuits, on which he was concentrating his powers, he would lay down his pen and join in the laugh at a good joke, and encourage the mirth to go on. He had an ever-active sense of humour ; but scandal and gossip he would not allow in his presence, and he would never pass over any violation of high principle. He made loving companions and friends of his children—in his walks, in his talks, in his work, in his recreation, he was always one of them. He invited their confidence, and freely gave them his ; in that household there were no secrets—any step that was about to be taken, any journey made, or any work projected, was fully and freely talked over and discussed in family conclave. And yet his word was law, that no one ever dreamt of disputing ; so he was always the last to speak in these family councils, and gave the " casting-vote," as he used to say ; the youngest voting or giving their opinion first on the matter under discussion.

Most of his voluminous writings were thus freely submitted to the family council, or copied by them, and each one invited and encouraged to criticise ; and thus, not only were they made familiar with the workings of his mind, but were taught to express their own thoughts.

He wrote or composed and dictated his greatest books in

his parlour, surrounded by his family, and it seemed sometimes as if he possessed a dual consciousness, so quickly could he abstract or concentrate his mind upon his writing.

Like few great men, he was the greater the closer one got to him. Little children approached him confidently, and never left him without bearing away some good lesson, so gently and simply taught as to be for ever planted in their young minds. His especial pleasure was to say a kind word and lend a helping hand to young men beginning the battle of life.

Above all men, he knew the value of praise as an incentive to high endeavour, and when he had occasion to censure or criticise, he did it with such obvious reluctance that it never failed to do the good intended.

While at home, he had been taught to respect women, to love the truth, and to reverence God; and those teachings he never forgot. One of his daughters writes as follows:—

“He never had a study, or anything like a sanctum, where his wife and children could not come, preferring to work in the midst of them wherever they congregated. He would sit at the round marble-topped centre table, with his papers spread out, the bright light falling on his bald head and shining on his brown curls, while he sat unconscious of what was going on around him; whether it was music, or dancing, or reading aloud, or romping, he would write away, or read what he had written, or talk to himself and shake his head.”

His daughters often served as his amanuenses, and sometimes he dictated to two at once, while one of the little ones would balance herself on the rounds of his chair, and curl his back hair over the red-and-blue pencil he always used.

Sometimes he would walk up and down the two parlours wrapped in a light blue silk Japanese dressing-gown, quilted with eider-down which was a present from Captain Jansen,

the long ribbons, which should have been fastened around his waist, trailing behind him, or gathered up like reins in the hands of one of the little ones, who trotted after him, backwards and forwards, calling out "Gee, woa!" or "Back, sir!"—he paying not the slightest attention, but dictating gravely.

He used to say he was the youngest of the family except the baby, and it was his habit, when dressing in the morning, to seat the youngest (the little two-year-old) upon the bureau, to hold the soap while he was shaving, while the rest would stand around, one to hold or receive the razor, one the brush, one the towel, and one or two the papers on which to wipe the razor; and we all would eagerly watch the pile of lather which he made with the soap and hot water in his shaving-can. He brushed his bald head with two immense brushes at the same time, one in each hand. "For," he assured us gravely, "you see, if I only use one at a time it will turn me round and round like one oar to a boat." And we believed that that was the only way to brush hair. Then he would tell us stories and anecdotes about his brothers and himself—what they did and what they said in Tennessee, and of his home-life there. These stories he would tell over and over again, fitting them to the comprehension of the "two-year-old," as she or he would come on (and there was always a baby and always a "two-year-old" at regular intervals), until we knew them by heart, and, with a clamour of tongues, would set him right if he omitted any incident or related it in the wrong order. And we knew exactly when to laugh and applaud, and enjoyed it all the more because it was so familiar.

Often he would take the whole tribe out for long walks, or to gather fruit or nuts, or bright-coloured leaves; and to reach the high ones he would make what he called a "Tennessee arm," which was a long pole with a crutch at the end, with which he could twist them off, directing us where

to stand and hold up our little pinafores to catch the coveted prize ; and then what laughter and hurrahs and congratulations would be bestowed upon the fortunate catcher !

He had pet names for all except the eldest ; he said she grew up too fast for him to fit a name to her. There were " Nannie Curly," " Goggen," " Davy Jones," " Tots," " Glum," " Brave," and " Sat Sing." By these names he always called us, and we knew we had displeased him, and hung our heads with shame, if he gave us our baptismal ones.

I don't think I ever went to school more than three months altogether. He was my loving and tender teacher always ; and when Betty and I grew to be fifteen or thereabouts, we had to take care of one or two of the younger ones and teach them to read, write, and cypher, yet without allowing this duty to interfere with our own lessons or our regular tasks of sewing.

He taught us our lessons at the breakfast-table, and for an hour or so after, his plan being to bid us—my sister Betty and myself—"one at a time, tell him about the lesson." He seldom asked us questions on it, unless we found a difficulty in expressing ourselves, and he never asked those put down in the book. After both had had our say, he would, taking the lesson for a text, deliver the most delightful lectures. He prescribed no set time for our preparation of these lessons ; but we were required to master them thoroughly, and give the substance to him clothed in our own words and not in those of the book. He always expected and required that we should not prepare them at night, but should then come into the parlour to receive and entertain and be entertained by the distinguished men and women who frequently gathered round him. He considered this a most important part of our education.

He objected to the introduction of cards in the family circle, as he said they interfered with intelligent and

improving conversation, and that those who had recourse to them for amusement were apt to depend on them, and could not exert themselves to be agreeable as they should and would do, if they had not this entertainment. He himself did not know one card from another.

Our mother taught us our Bible lessons, and catechism, and she and aunt Eliza, who was a beautiful needlewoman, gave us regular tasks in mending and darning. We seldom went to church more than once on Sunday, as it was so far from the Observatory to St. John's (Rev. Dr. Pynes), so Papa had us up regularly for the evening service, which we would read verse about, "the stranger that was within our own gates" generally taking part also.

He read aloud to us Scott's novels, Shakespeare's plays, and many of the British poets, particularly Scott's poems, Wordsworth's, and Mrs. Hemans'. Of these he was very fond.

He would never allow us to read works of fiction whilst we were students, and would punish most severely any departure from the truth, or act of disobedience. These two sins, he said, were the only ones he intended to punish his children for; and he was very careful not to make unnecessary issues with them, and never to give an order unless he saw that it was obeyed and not forgotten.

A punishment he once inflicted on Betty and myself I shall never forget. Betty borrowed 'Helen,' one of a very handsome and complete set of Miss Edgeworth's novels, from cousin Sally Fontaine in Washington, thinking, or persuading herself, that Papa would not object, as that was so mild a type of fiction, and we both read most of it. He found us at it one Saturday. He didn't say one word, but took the book, and one of us in each hand, marched us downstairs into Mamma's room (which was opposite the front parlour, and where there was almost always a small fire burning on the

hearth), and, to our horror, thrust the handsome borrowed book into the flames, and held it there with the tongs until it was entirely consumed. Oh, how we did cry! It seemed such a terrible thing to burn a book—a precious book—of which we had so few. And then our honour was touched to the quick, for we had borrowed it. But for those very reasons the lesson cut deep, and made the impression that was intended. I for one would gladly have taken a whipping instead, to be allowed to return the book uninjured.\*

Another punishment that was never forgotten was this. Finding I had quite a taste for natural science, my dear father had given me a fine microscope, of which I was very fond, and one day some instrument-maker sent an elegant brass-mounted telescope about twice my length, and of sufficient power to show the rings of Saturn, and the moons of Jupiter. Papa told me if I would learn how to handle the big telescope at the Observatory, and how to find any star I wanted by obtaining the right ascension and declination from the Nautical Almanac, and how to make and record an accurate observation thereon, he would give me this beauty in its handsome mahogany box for my own.

I joyfully acceded to these terms, and in less than a month I came into possession. Oh, how proud I was when, on a clear night, I would mount my prize on its polished tripod, on a big stone pillar in the garden, and show my little friends anything they called for that was then within our horizon! But one sad Saturday Satan entered into me, and I neglected to do my task of mending in the time allotted to it, being occupied with my dear telescope. I was called up, reprimanded, and told to have my task done in an hour and a half. Going back upstairs to the library, I went sky-scraping, through the big north window, with my

\* He carefully concealed then from us the fact that he replaced the volume, and years passed before we found it out.

instrument, with the coloured lens screwed in for day observations. I thought, "I'll take one more look and then hurry up my task;" but that look took longer than I expected, and very little of the task was done when the time was up. The case was referred to Papa, who, without a word spoken, boxed up my telescope and shipped it off—I never knew where to this day. For years I could not speak of it without tears.

When Betty and myself were almost grown up, and he began to travel about the country to address the agricultural societies of the different States about "Meteorology for the Farmers," and "Crop and Weather Reports," he said, as we had been so faithful in teaching the little ones, he would take first one of us and then the other wherever he went. So we made two trips with him, and then came the Brussels Conference, "to propose a uniform plan of observations at sea, and to adopt a meteorological log."\* He said such a chance might never occur again, and, if he could "raise the wind," he would take us both that time. "The wind" was raised somehow, and we both went, accompanied by our two cousins, Ellen Herndon and Ellen Maury. Betty, the eldest of the party, was not seventeen when we sailed. Ellen Herndon was a lovely blonde, Ellen Maury a very handsome brunette. Sure such a merry party never sailed the broad ocean before! We were dubbed "The Magpie Club" by acclamation on board the steamer. When landed at Liverpool, we found awaiting us an invitation from Lord Wrottesley for us all to visit him at Wrottesley Hall near Wolverhampton. The house was in Cromwell's time the "Convent of White ladies," and in its park stood the "Royal Oak," in which Richard Penderill hid the fugitive prince after the disastrous battle of Worcester. So we were wild to go, and the invitation was accepted. Lord Wrottesley had been a correspondent of my father's for

\* See page 72.



several years, being himself a learned man and President of the Royal and Astronomical Societies.

On this trip we visited many cities in England, France, Holland, Belgium, and Germany with my father, and we were fêted and entertained everywhere. We were so proud to be introduced by him to such men as Baron Humboldt, Erenburg, Jansen, Quetelet, Le Verrier, Lieber, FitzRoy, and others.

## CHAPTER XII.

Maury's letter on the harmony between science and revealed religion—The work of Colonel Smith of the Virginia Military Institute—Letters to his daughters after marriage—Correspondence during his lecturing tour, and extracts—Letters to Bishop Otey—Maury's address on the study of physical geography.

IN the years immediately preceding the breaking out of the war between North and South, Maury delivered a number of popular lectures in various cities of the North and West, and his correspondence during that period, both private and official, is full of interest. In making a selection from numerous letters, it is with intent to illustrate his character and the direction his thoughts and opinions took, from more than one point of view. In the present chapter we introduce a letter on the harmony between science and revealed religion, another on the labours of General Smith of the Virginia Military Academy, and two letters of advice to his young married daughters. Then follow some letters and notices relating to his course of lectures. The letters to Bishop Otey are memorials of a warm and lifelong friendship; while Maury's address on the study of physical geography, when he laid the corner-stone of the University of the South in East Tennessee, is a fitting conclusion to the period of peaceful work.

From the *Southern Churchman* :—

*Letter by M. F. MAURY.*

THE BIBLE AND SCIENCE.

Observatory, Washington, Jan. 22, 1855.

Your letter revived pleasant remembrances. Your questions are themes. It would require volumes to contain the answers to them.

You ask about the "harmony of science and revelation," and wish to know if I find distinct traces in the Old Testament of scientific knowledge, and in the Bible any knowledge of the winds and ocean currents. Yes, knowledge the most correct and reliable.

Canst thou bind the sweet influences of the Pleiades? It is a curious fact, that the revelations of science have led astronomers of our own day to the discovery, that the sun is not the dead centre of motion around which comets sweep and planets whirl, but that it, with its splendid retinue of worlds and satellites, is revolving through space at the rate of millions of miles in a year, and in obedience to some influence situated precisely in the direction of the star Alcyon, one of the Pleiades. We do not know how far off in the immensities of space that centre of revolving cycles and epicycles may be, nor have our oldest observers or nicest instruments been able to tell us how far off in the skies that beautiful cluster of stars is hung "whose influences man can never bind." In this question alone, and the answer to it, are involved both the recognition and the exposition of the whole theory of gravitation.

Science taught that the world was round; but potentates pronounced the belief heretical, notwithstanding the Psalmist, while apostrophizing the works of creation in one of his sublime moods of inspiration, "when prophets spake as they were moved," had called the world "the round world," and "bade it rejoice."

You remember when Galileo was in prison a pump-maker came to him with his difficulties, because his pump would not lift water higher than thirty-two feet. The old philosopher thought it was because the atmosphere would

not press the water up any higher ; but the hand of persecution was upon him, and he was afraid to say the air had weight. Now, had he looked to the science of the Bible, he would have discovered that the "perfect man of Uz," moved by inspiration, had proclaimed the fact thousands of years before—"He maketh weight for the wind." Job is very learned, and his speeches abound in scientific lore. The persecutors of the old astronomers would also have been wiser and far more just had they paid more attention to this wonderful book, for there they would have learned that He "stretcheth out the north over the empty place, and hangeth the earth upon nothing."

Here is another proof that Job was familiar with the laws of gravitation, for he knew how the world was held in its place ; and as for "the empty place" in the sky, Sir John Herschel has been sounding the heavens with his powerful telescope, and gauging the stars ; and where do you think he found the most barren part—"the empty places" of the sky ? In the north, precisely where Job told Bildad, the Shuhite, the empty place was stretched out. It is there where comets most delight to roam and hide themselves in emptiness.

I pass by the history of creation as it is written on the tablets of the rocks and in the Book of Revelation, because the question has been discussed so much and so often, that you, no doubt, are familiar with the whole subject. In both the order of creation is the same. First, the plants to afford subsistence, and then the animals, the chief point of apparent difference being as to the duration of the period between "the evening and the morning." "A thousand years are in His sight as one day," and the Mosaic account affords evidence itself that the term "day," as there used, is not that which comprehends our twenty-four hours. It was a day that had its "evening and morning" before the sun was made.

I will, however, before proceeding further, ask pardon for mentioning a rule of conduct which I have adopted in order to make progress with these physical researches, which have occupied so much of my time and so many of my thoughts. The rule is, never to forget who is the Author of the great volume which Nature spreads out before us, and always

to remember that the same Being is the Author of the book which revelation holds up to us, and though the two works are entirely different, their records are equally true, and when they bear upon the same point, as now and then they do, it is as impossible that they should contradict each other as it is that either should contradict itself. If the two cannot be reconciled, the fault is ours, and is because, in our blindness and weakness, we have not been able to interpret aright either the one or the other, or both.

Solomon, in a single verse, describes the circulation of the atmosphere as actual observation is now showing it to be. That it has its laws, and is obedient to order as the heavenly host in their movements, we infer from the facts announced by him, and which contain the essence of volumes by other men. "All the rivers run into the sea, yet the sea is not full;" "Into the place from whence the rivers come, thither they return again."

To investigate the laws which govern the winds and rule the sea is one of the most profitable and beautiful occupations that a man—an improving, progressive man—can have. Decked with stars as the sky is, the field of astronomy affords no subjects of contemplation more ennobling, more sublime, or more profitable than those which we may find in the air and the sea. When we regard these from certain points of view, they present the appearance of wayward things, obedient to no law, but fickle in their movements, and subject only to chance.

Yet, when we go as truth-loving, knowledge-seeking explorers, and knock at their secret chambers, and devoutly ask what are the laws which govern them, we are taught, in terms the most impressive, that "when the morning stars sang together, the waves also lifted up their voice," and the winds, too, "joined in the mighty anthem."

And as the discovery advances, we find the mark of order in the sea and in the air that is in tune with the "music of the spheres," and the conviction is forced upon us that the laws of all are nothing else but perfect harmony.

Yours respectfully,

M. F. MAURY, Lieut. U.S. Navy.

*To B. F. MINOR, of Ridgway, Albemarle Co.*

DEAR FRANK,

Observatory, July 25th.

The chills have been treating me so badly, in spite of the sun-flowers, that I declined, yesterday, a most inviting invitation to accompany the directors of the Atlantic Submarine Telegraph Company in a nice steamer, on a tour of inspection as far as Newfoundland, to select the terminus there, and other matters. They are to set off on the 1st of August.

What you say about Colonel Smith\* illustrates my doctrine about great men, for all useful men are great; it's the talent of industry that makes a man. I don't think that so much depends upon intellect as is generally supposed; but industry and steadiness of purpose, they are the things. . . . By the way, Smith invites Major Mordecai and myself, in the name of the State, to visit Lexington next June as a Board of Examiners. Before answering, I wanted to know what would be expected of us—to examine the boys, and show ourselves off at their expense? If so, then I can't go; on the contrary, if it be to look on and form our own judgment of teachers, instruction, and pupils, then the case will be different.

*To his eldest Daughter.*

MY DEAR DAUGHTER,

Buffalo, Nov. 26th, 1856.

My thoughts dwell with you, and my heart, brimful of the most tender and affectionate solicitude, clings to you. Alone in my room, there is something which keeps you ever present. The step you are about to take is the step of life—with a woman it certainly is such.

You have given your hand to a young man of irreproachable character, of an amiable disposition, and a cultivated mind, and were it not that he is of kin, the match would be as free from objection and quite as promising as need be.

That you are both poor is no ground of solicitude; happiness is above riches, and if you are not happy, being poor, wealth would not, I apprehend, make you happy. Poverty has its virtues, and my struggles with it are full of pleasant

\* Afterwards General Smith of the Va. Military Institute.

remembrances. I hope your experience will tally with mine. I do not say, strive to be content, for in that there is no progression ; but be content to strive.

I told Will you ought to live to yourselves. It would be a high gratification to have him make my house his home ; but I think, on your account, it would be better for you to betake yourselves to housekeeping. True, if you do, it must be in a very plain way. Your Mother and I commenced house-keeping when my pay was \$40 a month, and we lived as happily then as we do now.

I attach great consequence to the manner and place of life for the first year or two after marriage : it is then that the mould for domestic happiness is cast ; it is then that true character and disposition develop themselves on both sides, and that is the time for assimilation to take place, each accommodating and moulding oneself to the other.

If you go to yourselves you will have time to familiarise yourself with your husband's affairs, which you will not do if you live in a crowd ; and that, my daughter, should be your first duty ; for thereby you fit yourself to become his counsellor, companion, and friend in the broadest sense of the term.

I found, when I arrived here this morning, a letter from your Mother. She tells me there is a talk of your being married before Lent. I am sure she is, as I am, entirely disposed to consult your own wishes in this matter.

\* \* \* \* \*

*27th, morning.*—I was dreaming of you, the sweetest of the dreams of sweet sleep last night ; I waked again and again to a consciousness of the pleasant visions, enjoyed them waking, and dozed off to enjoy them over again in sleep, bless your heart !

There was a great jam at the lecture last night. Before the doors were opened, the side-walks for three squares were blocked up by people going an hour before the time to make sure of a good seat. They tell me that 2 or 3000 were turned away. I have lectured two nights in the rain to well-filled halls ; I am as bright as a lark this morning ; they

have procured the largest church in the city for this evening.

My love and a kiss for Nannie. . . . Love to all hands.  
God bless you, my child, is daily the prayer of

Your affectionate father,

M. F. MAURY.

\* \* \* \* \*

How does Dick come on with the drawing? I am so afraid he is becoming too reserved. Perhaps the wish may be unreasonable, but it is a very earnest one, that my children should treat me not only as their father and as their friend, but as their companion too, in so far as companionship may not be inconsistent with difference of age. . . .

Good-bye, and may God bless you and make you happy, my child!

M. F. MAURY.

*First letter to his daughter DIANA after her marriage to  
MR. S. W. CORBIN, of Farleyvale (Virginia).*

MY DEAR NANNIE,

Observatory, May 9th, 1858.

Yours was a sweet letter; it and Mr. Corbin's did our hearts much good. We miss you so much; the flowers look lonesome, and the songs of the birds sound loud.

This is little Lucy's birthday—seven years old. It will be ten years, I reckon, before she will be coming out. Her Mamma pitched into her and the boy (M. F., Jr.) last evening. She found a moss-rose in flower this morning. Davy Jones and the boy went in the waggon to fish at the Little Falls yesterday; they were gone all day, but didn't get a nibble.

As near as I can guess, it's just about seven years since you went away. I have not seen Betty since, and we have heard from Dick but once, and Glum twice. I went to the Capitol with cousin Ann and Mary yesterday. Mit and Ellen are with us.

Our hearts were touched by the conduct of those excellent people, who greeted you with so much kindness and affection on your arrival at Moss Neck. Such a welcome must have gone far towards making you feel completely at home right



off the reel. Life is made up of trifles, and our greatest happiness often depends upon a word, the glance of an eye, the tone of the voice, or what is more expressive, but more indescribable still, the manner. What a boon, a pleasure, and a blessing are pleasant manners! They give grace and confer happiness, far more than pearls or precious stones. Cultivate day by day pleasantness of manner. Let us analyse it. Of what, or in what does pleasantness of manner consist? That trait which gives elegance and grace to woman, comeliness, and the power of doing good.

After church "Davy Jones" (John), your Mamma, and I dined alone. The children staid down town to the Sunday School celebration. But I was speaking of the Christian graces and human virtues and those traits which you should cultivate, and which embellish and adorn the character. The one great point which, after duty to God, you are to keep constantly in view is, to identify yourself with your husband, and strive mutually each to make yourselves the companion of the other.

There is but one way to do this, and that is by teaching yourself, my dear, to take an intelligent interest in those affairs and occupations which are from time to time employing your husband's thoughts and life. The husband's affairs are, in the married life, the affairs of the State. He provides; and, to say the least, the wife who seeks to be posted up in everything that concerns him, especially in the every-day affairs of life, does nothing more than render a grateful homage. Do you, my love, first set the example, and if you do not win tenfold, I have much mistaken the character of the man who has won your affections.

You must learn the servants on the plantation by name, the cattle and the fields too; you must learn of Wellford, in the morning, what he is going to do during the day, and take the same lively interest in his occupations as you would do were they your own. The Farm Book \* will help you to do this, and if its dry details be mastered for the first year they will be dry no longer, for then you can tell him when to sow and when to reap, how the signs and seasons are. Then

\* Alluding to a large blank book he had given her for the purpose.

hospitalities and good-neighbourhood, a smile of welcome from mine hostess and a gentle voice make a sauce that is savoury for anything; and the poor—I do not mean more especially objects of charity, but those who are in a more humble sphere of life than it has pleased God to place you—never lack, as in your sweet little heart I am sure you never do, in consideration for them. I must not caution you against the bad taste of patronizing, for your manner of life and good-breeding secure you against that. What I meant was merely to caution you against the foolish habit of waiting to be spoken to; speak to everybody without waiting.

There is no trait perhaps more winning than that of a generous confidence. Self-examination—constant, close self-examinations—are indispensable; there are some that may be made all the better with the assistance of your husband—make them. Confidence begets confidence.

I would have you both bear in mind that this is the time for you to accommodate and adjust yourselves to each other, and with two such comely dispositions to work upon, this may be soon accomplished, and that so thoroughly that all your future life will abound in the good results.

Then, too, my dear, you must not forget to treat with affection all Mr. Corbin's friends and relations. They are disposed to be kind and good to you—meet them a little more than half-way. As for reading, with your good taste you cannot go well amiss; only, in selecting authors, do not select merely for amusement—select for profit also.

I am writing you a very disjointed letter, my love, but I have been thinking so much of you, and missing you so sorely, and loving you so tenderly, since you went away, and my heart was so full, and my head so empty, that I hardly know what I have said. Did you plant the yellow jasmine at Farleyvale? 'Tis the grand scion of the one I courted your Mother under, and I wish it, or a slip from it, to be planted over my grave.

The boy will go down to see you on his own hook next Tuesday—great boy that! You and Wellford should write by every mail to us. Good-bye, and God bless you both!

Your affectionate Dad,

M. F. MAURY.

*To the same.*

Observatory, April 12th, 1858.

. . . . I am to go lecturing in Ohio from Nov. 22nd to Dec. 3rd. I want to deliver six lectures a week, and raise money enough to keep Dick at the University, pay off bills, and have some shots in the locker. . . .

M. F.

Of these lectures the *Cleveland Plain Dealer* said, on Nov. 22nd, 1858:—

“They have all the thrilling interest of romance, all the charming simplicity of narrative, and yet the grandest and most sublime principles of science are grappled with, and discussed with the erudition and ability of a master mind. In securing this truly distinguished scholar, the Cleveland Library Association has reflected credit, not only upon their organization, but upon the taste and culture of our citizens.

“Lieutenant Maury’s opening lecture was on the ‘Atlantic Telegraph,’ with which great achievement his name is so honourably connected. His other three lectures will be ‘On the Highways and Byways of the Sea,’ on extending to the lakes ‘A System of Meteorological Observations,’ and ‘The Workshops and Harmonies of the Sea.’

“Lieutenant Maury is particularly anxious that our business men should listen to his third lecture, as he is most desirous of carrying out for our lake commerce the system that has proved so valuable to the ocean marine.”

*To MRS. MAURY.*

MY DEAR WIFE,

Chicago, Nov. 20th, 1858.

Here I am in the midst of a great snowstorm. This is my lecture evening; I am afraid of empty benches. I am to sleep at Colonel Graham’s; but, as I have things to attend to, I shall not go there until after the lecture.

There was a great crowd at the Lecture Hall in Rochester.

I got through, and left on the cars at 3.45 A.M. Travelled all day; reached Ann Arbor at 8 P.M., found an audience waiting for me; hopped out, went straight to lecturing, delighted the audience, rode a mile to a party, took a hot supper, and so back to the cars at 10; travelled all night in a sleeping-car, and reached this place at 9 this morning; so here I am. Have just had dinner, and am going to try for a nap presently. I told M., of the *Rural New Yorker*, to send you a cheque; write your name across the back of it, send it to the General, and ask him to get the money for you.

Where's my Betty, and where's my Nannie? I hope, if the latter went, the former came. On the 22nd I lecture here; 23rd in Kalamasoo; 24th, no place fixed—perhaps Indianapolis; 25th, Cleveland; 26th, Laporte, Indiana, I reckon; 27th, here; 29th, Cincinnati. The weather is very cold. Kiss all my children, and tell me you are all well and happy. I want to astonish you with a present: tell Tots and Glum and Lucy and the boy to put their heads together and tell me what to bring. This is a furious storm! Give my love to Mary and sister E.; I hope the latter continues to mend. God bless us every one! I am mighty tired of staying away from home.

Yours,

M. F.

MY DEAR WIFE,

Kalamasoo, Mich., Nov. 23rd, 1858.

I had a time of it in Chicago. Last night it rained worse than it rained Saturday night, and the attendance was slim. I stopped at Colonel Graham's, you know; he gave me a nice party last night. He was a soldier; he would have me waked up in time for the cars at 6; he never got left behind. He would have breakfast for me—at least, the cook would; but, bless your heart, honey! not a soul waked up till the cook came; so I was up and dressed and off in about ten minutes. When I arrived here, Senator Stuart, with a committee, was at the cars to escort me to the hotel. He and his wife leave for Washington Saturday; they will stop at the St. Charles. I wish you and Betty would call on her: I want to invite them up to spend the day when I get back.

You must make a heap of calls, and leave my cards everywhere. Get a nice hack, and don't overdo the thing by breaking yourself down. Take several days. . . .

MY DEAR WIFE,

Chicago, Nov. 27th, 1858.

Since last I wrote, I have lectured in Kalamasoo, Indianapolis, Cleveland, and Laporte; make the children find the places on the map. To-night I lecture here. It is now 10 A.M., and raining. I go to Colonel Graham's directly; hope to find there a letter from you. I am very well except a cold. I do long to get over this task; it has been gloomy weather ever since I've been in the lake country—for more than a week. It is now snowing and storming furiously; but I don't lecture on my own hook, that's a comfort!

I had a packed house in Cleveland: they had to stop selling tickets and turn off the people—house full.

I have travelled since I left home 1844 miles, have been from home 12 days—10 days on my lecture ground—and have lectured nine times. I am dying to be with you all!

Your affectionate

M. F.

The following account of the lectures is from the *Chicago Press and Tribune* of November 23rd, 1858:—

"The subject of Lieutenant Maury's lecture was the importance of a 'Careful Meteorological Survey' of the great North-American Lakes. It was delivered before the Chicago Mechanics' Institute.

"The subject is one of the highest interest and importance. In Chicago, the great metropolis of the lakes, this distinguished *savant* and lecturer had a crowded house on the occasion of his treating of a theme so important as the navigation and commerce of these great inland seas, and the benefits accruing to all from their complete and perfect meteorological survey.

"The lecturer commenced by referring to the magnitude of this chain of lakes, containing as they do one-third of the

fresh water on the surface of the globe. . . . 'This great chain of lakes has been estimated to contain 11,000 cubic miles of fresh water.' To give an idea of the amount of this vast body of water, after explaining his mode of careful measurement of the Mississippi river at Memphis, the lecturer said, 'that the lakes contained more water than the Mississippi discharges into the Gulf of Mexico in one hundred years.' In other words, were all the waste from the lakes by evaporation and other causes to be cut off, and a sluice to be opened, the size of the Mississippi channel, it would flow a century in draining these vast inland seas.

"The lakes themselves contain a surface of 2000 square miles, and they drain a territory, or their water-shed, of 50,000 square miles.

"From the above figures it may well be imagined that this vast extent of fresh water maintains and subserves most important influences and purposes, as pertaining to the climate, temperature, and hygiene of their vast surrounding or tributary region.

"There is a difference, not universally well understood, between the effects on climate incident to their being fresh or salt. Were the lakes salt, like the Caspian, they would give to their region a warmer temperature; the winters, latitude remaining the same, would be milder, the summers more sultry. This arises simply from the effects of evaporation: fresh water, according to the observations of Professor Chapman at Montreal, evaporates faster than salt, carrying off more heat.

"The amount of the evaporation of the lakes was illustrated as follows. The Cataract of Niagara represents the excess of the precipitation, by rains upon the lakes and their watershed, over the evaporation.

"Thus in the lakes the evaporation may be represented as five or six times the water at Niagara, and to produce this

evaporation requires the same amount of heat that would suffice to raise Niagara to boiling-point, if such a thing may be imagined; and imagining this, we may conceive of what is actually going on. The loss of this amount of heat, parted with by the lakes, leaves them and their region colder in the winter and summer.

"In salt lakes the water enters warmer than does fresh water, from this loss of heat to the latter, and in winter there is a further difference. When fresh water is exposed to a change of temperature, it grows denser until it reaches 30 degrees, or near freezing, when it expands, thus rising to the surface. These lakes in winter have their coldest water at the surface; with salt water the reverse is true, and the water, continuing to grow denser with a lower temperature, sinks and leaves the surface-water the warmest; were the lakes salt water, navigation would continue the entire year round.

"These preliminaries passed, the speaker connected them with the interests of the lake region, of which he proceeded to speak. Quoting fully, and with honourable mention of their author, the full and clear reports of Colonel Graham of this city, he reviewed fully the perils to which lake fleets are exposed.

"According to Colonel Graham's report for 1855 to the department at Washington, the value of the shipping and commerce interested in the construction of a single break-water at Michigan city was \$218,000,000.

"According to observations taken, the value of shipping and commerce passing the flats of the St. Clair, on an average of 230 days for the busy season, reached the daily average of \$1,029,223. The entire value of the lake commerce was \$200,000,000 to each lake, ranging more to Lakes Michigan and Huron, less to Lake Superior; and, as Erie is an outlet to the others, the amount on that lake was \$300,000,000.

"And it is not the shipper, the vessel-owner, and the mariner who are alone interested, but it is the producer, the farmers of Illinois, Missouri, Iowa, and their sister States, and the consumers of the Eastern States.

"The effect of the commerce of the lakes and their improvement even thus far has turned the Mississippi upside down. It has actually placed one of its mouths at Sandy Hook, so that the people along the Mississippi Valley have no slight interest in the lake improvements.

"Study the rates of lake insurance: their figures should have spoken in tones that should command attention—the losses have been in millions of money. The shrieks of victims by disaster should have been heard, and should have produced the required system of improvements to the lake navigation long ago.

"This nation is enlightened, our rulers never object to appropriations for scientific purposes on scientific grounds solely. . . . He then said the Government employés, the lighthouse-keepers, &c., stationed throughout the entire chains should be instructed to take observations and report them to Colonel Graham of this city; the Lake Board of Underwriters can instruct their agents in lake towns and cities to do the same.

"He then eloquently referred to the aid to science furnished by the electric telegraph, which had well-nigh given to the meteorologist omnipresence. It will tell of the barometric changes at distant points, foretell the coming storm. Then the associated press is another agent: it will take up and bear the news to the bulletin boards in distant cities, and to the press, which with steam press and steam-driven car will strike off and diffuse the intelligence to all quarters with a speed 'Rhoderic Dhu' and Malise never dreamed of; and thus all will know of the coming storm while yet a thousand miles away.



"He insisted on the importance to the lake region of telegraphic interchange of information as to barometric changes, instancing interesting and striking examples.

"This part of the lecture was full of illustration and value, but our space forbids us to do it justice. He said the lake commerce has reached a figure we should have deemed chimerical a few years since for our ocean commerce.

"He would leave out of the question the value of such intelligence to all other departments save commerce. In four years, ending 1858, \$10,000,000 and 866 lives were lost on these lakes.

"Suppose but a quarter of this loss might be due to a lack of meteorological foreknowledge shown to be attainable. The same power exists to provide for the lakes, as for the salt water. Government has held back because the lake region has not come forward to ask it."

The following letter, from Maury to his wife, was written after delivering another lecture at Cleveland on Dec. 1st, 1858 :—

MY DEAR WIFE,

. . . . I arrived here yesterday at noon, and seem to have bewitched the people last night, as I did those of Cincinnati the evening before. Nannie's is a charming letter. I am so glad she is coming home on the 15th. I shall be turning my face homeward about that time.

Last Monday there was a change of R. R. time, which had played sad havoc with me. I left Chicago at 8 P.M. Sunday for Cincinnati, where I was due at noon Monday. But bridges had been washed away. I did not get to Indianapolis till 1 P.M., 112 miles from Cincinnati. I was to lecture there at 7.30, and all the trains had gone, so I thought I would see if I couldn't charter an engine and go down on it express. I found the President of the road, told him who I was and what I wanted, and he fitted up an elegant car, sent me down in it alone, and would not let me pay a cent. I arrived at 7,

and found an immense audience, lectured, got on the cars directly after, came here, and had an elegant night's rest. Lecture in Chicago again Saturday, and Monday in St. Louis, on the 11th here, and in Buffalo the 10th and 13th, I think. Don't go in that waggon any more. When you feel well enough to make calls, get a hack, take Nannie with you, and leave my cards everywhere.

Your affectionate

M. F. MAURY.

The exposure and fatigue of this lecturing tour brought on his first attack of rheumatic gout, from which he continued to suffer, at intervals, until his death fifteen years afterwards.

The following letters, to his old friend the Bishop of Tennessee, contain the first allusion to the threatened civil war :—

*To BISHOP OTEY, of Tennessee.*

MY DEAR OLD BISHOP,

Observatory, March 13th, 1860.

As for the Union, I see that it will have to drift. The dissolution of it will, I fear, come before you or I would be willing to see it. With statesmanship among our rulers, patriotism among our politicians, and virtue among the people, it need never come.

I have laid by the sermon to read it aloud to all hands on Sunday.

You recollect Mr. Malory, of Florida, was an active Navy Board man, and that he was very unfair, to say the least, in the Senate towards me. He has brought in a Bill to increase the pay of all the officers "except the Superintendent of the Observatory," and two other officers. Now, what is to be done with such an uncivil disposition? I do not wish to embarrass the Bill by any opposition to it, for the officers stand greatly in need of more pay; but I think I'll have to suggest an amendment making the pay of the "Superintendent of the Observatory" that of a Captain in command. Tell me what you think of it. I send you the Bill. . . .

God bless you, my dear old friend, prays your

M. F. MAURY.

*To the same.*

MY EXCELLENT FRIEND,      Fredericksburg, Aug. 20th, 1860.

I saw by the papers yesterday that you had had to give up certain engagements on account of sickness. Immediately my heart yearned towards you, and I said, "I'll write him a letter to-morrow;" so here I am, the first thing after breakfast, seated to carry out the resolve this beautiful Monday morning.

I hope, my friend, your sickness is not grievous. Still, the hope does not keep down my solicitude.

I am here on leave for a month, seeking such rest as within that time will afford most relaxation. I noticed a few weeks ago your advertisement from "University Place." From that I infer that all goes on well with the grand undertaking. You know my heart is always with you in that undertaking. I begin to fear you will have it up not a whit too soon, for I very much fear the Union is in danger. Causes seem to be at work which are destined to destroy the Union. . . .

I have been occupied, during the winter and spring, among other things, with a new edition of the 'Physical Geography of the Sea.' It is greatly enlarged, and, I hope, improved. It certainly presents many fine subjects for thought and contemplation. I know of nothing more profitable or ennobling than the discovery of new relations in the physical economy. To tell of these would require space beyond the limits of a letter. . . .

I have reason to believe that there is, about the South Pole, a comparatively mild climate. The unexplored regions there embrace an area equal in extent to about one-sixth of all the known land on the surface of the earth. I am quietly seeking to create in the minds of some an interest upon the subject, hoping thereby to foster a desire in right quarters for an Antarctic expedition.

We have in contemplation—Mrs. Maury, Nannie, Molly, and I—a visit to Niagara, intending to tarry at Newburgh a few days with Hasbrouck.

When you get well and are in the vein, let me hear from

you ; tell me how you are, and how about the prospects and everything connected with the University of the South. God bless you, my friend !

Yours,

M. F. MAURY.

*To the same.*

MY DEAR BISHOP,

Observatory, Sept. 15th, 1860.

Last Thursday Mrs. Maury and myself, with two of the children, returned from a visit to Hasbrouck and Niagara Falls, where we found your letter of the 3rd to help make our hearts glad. It was Mrs. M.'s first sight of the great cataract.

Take care of your health, my dear friend, for you are one of the men that your fellow-citizens cannot spare just now. I am glad to see you giving signs of returning health, but am sorry to recognise in these the marks of a health by no means completely restored.

I had fixed upon the 15th October for England, but your Corner-stone will put it off, I reckon, till the 20th. I feel as though I must be present when the foundations of this great University are to be laid. It is an institution in the success of which I feel the most lively interest. If I possess influence or weight with the public, it is a talent loaned, and this is precisely one of the occasions on which I ought to put it out.

So if you think my coming and my speech will help you on in your good and noble work, here I am—count on me, my friend.

If I leave here on Monday morning ; can I be with you in time on Wednesday ?

Yours truly,

M. F. MAURY.

Maury's address at the laying of the corner-stone of the University of the South, on the Sewanee Mountains in East Tennessee, was delivered at the request of Bishop Otey on Nov. 30th, 1860.

"Physical geography," he said, "makes the whole world kin. Of all the departments in the domains of physical science, it is the most Christianising. Astronomy is grand and sublime; but astronomy overpowers with its infinities, overwhelms with its immensities. Physical geography charms with its wonders, and delights with the benignity of its economy. Astronomy ignores the existence of man; physical geography confesses that existence, and is based on the Biblical doctrine 'that the earth was made for man.' Upon no other theory can it be studied—upon no other theory can its phenomena be reconciled. . . .

"The astronomer regards the light and heat of the sun as emanations; as forces to guide the planets in their orbits and light comets in their flight—nothing more. But the physical geographer, when he warms himself by the coal fire in winter, or studies by the light of the gas-burner at night, recognises in the light and heat which he then enjoys the identical light and heat which came from the sun ages ago, and which, with provident care, have been bottled away in the shape of a mineral, and stored away in the bowels of the earth for man's use, thence to be taken at his convenience and liberated at will for his manifold purposes.

"Here, in the schools which are soon to be opened, within the walls of this institution which we are preparing to establish in this wood, and the corner-stone of which has just been laid, the masters of this newly-ordained science will teach our sons to regard some of the commonest things as the most important agents in the physical economy of our planet. They are also mighty ministers of the Creator.

"Take this water" (holding up a glassful) "and ask the student of physical geography to explain a portion only of its multitudinous offices in helping to make the earth fit for man's habitation. There may be in it a drop of the very same (for in the economy of nature nothing is ever lost or

wasted) which watered the Garden of Eden when Adam was there; escaping thence, through the veins of the earth into the rivers, it reached the sea. Passing along its channels of circulation, it was conveyed far away by its currents to those springs in the ocean which feed the winds with vapour for rains among these mountains; taking up the heat in these southern climes, where otherwise it would become excessive, it bottles it away in its own little vesicles. These are invisible; but, rendering the heat latent and innocuous, they pass like sightless couriers of the air through their appointed channels, and arrive in the upper sky. This mountain draws the heat from them; they are formed into clouds and condensed into rain, which, falling to the earth, make it soft with showers, causing the trees of the fields to clap their hands, the valleys to shout, and the mountains to sing. Thus the earth is made to yield her increase, and the heart of man is glad.

“Nor does the office of this cup of water in the physical economy end here. It has brought heat from the sea in the southern hemisphere to be set free here for the regulation of our climates; it has ministered to the green plants, and given meat and drink to man and beast. It has now to cater among the rocks for the fish and insects of the sea. Eating away your mountains, it fills up the valleys, and then, loaded with lime and salts of various minerals, it goes singing and dancing and leaping back to the sea, owning man, by the way, as a taskmaster—turning mills, driving machinery, transporting merchandise for him—and finally reaching the ocean. It there joins the currents to be conveyed to its appointed place, which it never fails to reach in due time, with food in due quantities for the inhabitants of the deep, and with materials of the right kind to be elaborated, in the workshops of the sea, into pearls, corals, and islands—all for man’s use.

“Thus the right-minded student of this science is brought

to recognise in the dewdrop the materials of which 'He who walketh upon the wings of the wind maketh His chariot.' He also discovers in the raindrop a clue by which the Christian philosopher may be conducted into the very chambers from which the hills are watered.

"I have been blamed by men of science, both in this country and in England, for quoting the Bible in confirmation of the doctrines of physical geography. The Bible, they say, was not written for scientific purposes, and is therefore of no authority in matters of science. I beg pardon! The Bible is authority for everything it touches. What would you think of the historian who should refuse to consult the historical records of the Bible, because the Bible was not written for the purposes of history? The Bible is true and science is true, and therefore each, if truly read, but proves the truth of the other. The agents in the physical economy of our planet are ministers of Him who made both it and the Bible. The records which He has chosen to make through the agency of these ministers of His upon the crust of the earth are as true as the records which, by the hands of His prophets and servants, He has been pleased to make in the Book of Life.

"They are both true; and when your men of science, with vain and hasty conceit, announce the discovery of disagreement between them, rely upon it, the fault is not with the witness of His records, but with the worm who essays to interpret evidence which he does not understand.

"When I, a pioneer in one department of this beautiful science, discover the truths of Revelation and the truths of science reflecting light the one upon the other, how can I, as a truth-loving, knowledge-seeking man, fail to point out the beauty and rejoice in its discovery? Reticence on such an occasion would be sin, and were I to suppress the emotion with which such discoveries ought to stir the soul, the

'waves of the sea would lift up their voice,' and the very stones of the earth cry out against me.

"As a student of physical geography, I regard earth, sea, air, and water as parts of a machine, pieces of mechanism, not made with hands, but to which, nevertheless, certain offices have been assigned in the terrestrial economy; and when, after patient research, I am led to the discovery of one of these offices, I feel, with the astronomer of old, 'as though I had thought one of God's thoughts,' and tremble. Thus, as we progress with our science, we are permitted now and then to point out here and there in the physical machinery of the earth a design of the Great Architect when He planned it all.

"Take the little Nautili. Where do the fragile creatures go? What directing hand guides them from sea to sea? What breeze fills the violet sails of their tiny craft? And by whose skill is it enabled to brave the sea, and defy the fury of the gale? What mysterious compass directs the flotilla of the graceful Argonauts? Coming down from the Indian Ocean, and arriving off the stormy Cape, they separate, the one part steering for the Pacific, the other standing for the Atlantic Ocean. Soon the ephemeral life that animates these little navigators will be extinct; but the same power that cared for them in life, now guides them after death; for though dead, their task in the physical economy of our planet is not yet finished, nor have they ceased to afford instruction in philosophy.

"The frail shell is now to be drawn to distant seas by the lower currents. Like the leaf carried through the air by the wind, the lifeless remains descend from depth to depth by an insensible fall, even to the appointed burial-place on the bottom of the deep, there to be collected into heaps and gathered into beds, which at some day are to appear above the surface, a storehouse rich with fertilizing in-



gredients for man's use. Some day science will sound the depths to which this dead shell has fallen, and the little creature will perhaps afford solution for a problem as yet unsolved ; for it may be the means of revealing the existence of the submarine currents that have carried it off, and of enabling the physical geographer to trace out the secret paths of the sea.

" Had I time I might show how mountains, deserts, winds, and water, when treated by the light of this beautiful science, all join in one universal harmony, for each one has its part to perform in the great concert of nature. . . .

" The Church, ere yet physical geography had attained to the dignity of a science in our schools, and even before man had endowed it with a name, saw and appreciated its dignity, the virtue of its chief agents. What have we heard here in this grove by a thousand voices this morning ? A song of praise, such as these hills have not heard since the morning stars sang together the ' Benedicite ' of our mother Church, invoking the very agents whose workings and offices it is the business of the physical geographer to study and point out. In her services she teaches her children in their songs of praise to call upon certain physical agents, principals in this newly-established department of human knowledge ; upon the waters above the firmament, upon the showers, dew, wind, fire and heat, winter and summer, frost and cold, ice and snow, night and day, light and darkness, lightning and clouds, mountains and hills, green things, tree and plants, whales, and all things that move in the waters, fowls of the air, with beasts and cattle, to bless, praise, and magnify the Lord ! "

In the end of 1860, Maury had occasion to visit England on business connected with the publication of his book. While he was in London, he was the guest of the Royal

Geographical Society at the anniversary dinner of 1861, when the late Lord Ashburton was in the chair. On that occasion Maury advocated the exploration of the Antarctic Regions, with a view to selecting a proper place for the observation of the next transit of Venus. He received the most sympathetic applause from a large audience. When he returned to America, the gloomy prospect of a great calamity was already darkening the land.

## CHAPTER XIII.

Breaking out of the civil war—Maury's letter to Bishop Otey—His Appeals to the Governors of Pennsylvania, New Jersey, Maryland and Delaware—Letters to Mr. Hasbrouck of Newburgh—Lincoln's Proclamation calling on Virginia to furnish troops to subjugate S. Carolina—Reply of Virginia—Maury resigns his commission and leaves Washington—Offers from the Grand Duke Constantine and from France—Maury's reply—Defence of Maury's decision in letters to a friend—Maury appointed Chief of the Sea-coast, Harbour, and River Defences in the South.

WE have now followed the subject of this biography to the period when he had reached the highest point of his worldly prosperity. The National Observatory, under his able management, was daily increasing in usefulness; from nothing it had sprung into an institution of the first rank. An important astronomical work, on which he had been long engaged, entitled 'Astronomical Observations, Cataloguing the Stars,' was progressing satisfactorily; other projects which he had devised for the advancement of science seemed on the point of realization, when the great storm of civil war burst upon him in the midst of his useful labours.

Maury made earnest efforts to avert war, maintain peace, and insure to the South her equal rights in the Union. He addressed pathetic appeals to the Governors of Pennsylvania, New Jersey, Maryland, and Delaware, "to stand in the breach and stop this fratricidal strife."

To Governor Packer, of Pennsylvania he wrote :—

DEAR SIR,

Observatory, Washington, Jan. 3rd, 1860.

When the affairs of a nation are disturbed, quiet people, however humble their station, may be justified in stepping a little out of their usual way. In all exertions of duty, something is to be hazarded; and I am sure you have only time to hear what I wish to write—none to listen to apologies for venturing to write you this letter. You recollect that, in the nullification times of South Carolina, Virginia stepped forward as mediator, and sent her commissioners to that State with the happiest results. But we are now in the midst of a crisis, more alarming to the peace and integrity of the Union than those memorable times. We have the people, in no less than seven of those States, assembling, or preparing to assemble, in their sovereign capacity to decide, in the most solemn manner known to them, whether they will remain in the Union or no. The most remarkable feature in the whole case is, it appears to me, this—that here we have a national family of States that have lived together in unity for nearly three-score years and ten, and that a portion of them are preparing to dissolve these family ties and break up the Union, because—because of what, sir? Ask legislators, ask governors, ask whom you will, and there are as many opinions as to the causes of discontent and the measures of redress, as there are leaves in the forest. At no time have the people of any one of the discontented States, acting in their sovereign capacity, even authorized a remonstrance to be made to their sister States of the North against their course of action. We have heard a great deal of this from politicians, partisans and others, but if the people of any one of the Southern States, acting in their sovereign capacity, have ever remonstrated with the people of the Northern States as to the causes of dissatisfaction and complaint, and thus laid the matter formally before you of the North, I cannot call it to mind. Neither has any Northern State so much as inquired of the people of any Southern State, either as to the cause of their offence, or as to the terms and conditions upon which they would be willing to remain in the Union.

It does appear to me that in and out of Congress we are all at sea with the troubles that are upon us; that the people, and the people alone, are capable of extricating us. You, my dear sir, and your State—not Congress—have it in your power to bring the people into the “fair way” of doing this. This brings me to the point of my letter—then why will not the great State of Pennsylvania step forth as mediator between the sections? Authorize your commissioner to pledge the faith of his State, that their ultimatum shall not only be laid before the people of the keystone State, assembled likewise in their sovereign capacity, but that she will recommend it to her sister States of the North, for like action on their part, and so let the people, and not the politicians, decide whether this Union is to be broken up.

I am sanguine enough to believe that the great body of the Southern people entertain opinions, sentiments, and feelings in conformity with my own in this matter. With distinguished consideration, I have the honour to be,

Respectfully, &c.,

M. F. MAURY.

To His Excellency Gov. Wm. F. PACKER,  
Harrisburg, Pa.

To Judge J. S. Black, of Penn., he also writes:—

DEAR JUDGE,

Observatory, Jan. 3rd, 1860.

I have an abiding faith that if we can draw a proposition from the people of any one of the Southern States before things get too far, all may yet be well.

If you think with me, please lend a hand to stir up Pennsylvania to mediate, and send a commissioner for the purpose.

In haste, yours truly,

M. F. MAURY.

*To a Friend in Newburgh.*

Right in the middle of the Atlantic,

On board steamer ‘New York,’

MY DEAR H.,

December 7th, 1860.

I sailed from New York 28th Oct., arrived in London 14th Nov., left again Nov. 27th, and sailed from Southampton

Nov. 28th, having accomplished the immediate object of my visit, which was to copyright the new edition of the 'Physical Geography of the Sea, and its Meteorology.' This is almost a new work. In England, I have dedicated it to Lord Wrottesley, who has assisted the cause (of meteorology) so much; and in the U. S., I have dedicated it to Wm. C. Hasbrouck, of Newburgh, who has been such a good and true friend to the author from early youth till now.

Till now! Do we belong to the same country yet, Hasbrouck? A queer question to ask, you will say; but you must recollect that I left home before the elections—have not seen a Southern paper since; and the latest accounts I have seen from the U. S. are contained in the *New York Herald* of the 13th, 14th, and 15th of last month—over three weeks ago! The people of South Carolina and C. have been more precipitate than I anticipated; and now, my friend, unless you good men of the North and South will bestir yourselves, and take matters into your own hands, and out of those of the politicians, I fear me—I fear me, we shall not be long of one country! . . .

I was very much engaged while in London with the business that took me there. I received much consideration, and was brought into social intercourse with the best people of the realm, all of which was very charming, but, after all, not worth the absence from my dear home, the sweet wife and dear children with which each of us is blessed, and which makes home the sweetest place on the face of this earth. Good-bye.

Yours,

M. F. MAURY.

DEAR H.,

Observatory, March 4th, 1861.

. . . . The new President is now on his way to the capitol, and the *Express* reports "All Quiet," as I took it for granted it would be. I have no idea of any disturbance, or any attempt even at a plot. Of course, you will see the Inaugural as soon, if not sooner, than I shall, for, having the telegraph, Mr. Lincoln may literally speak his polyglot through tongues of fire.

Officers of the Army and Navy—should war come between the sections—will have a hard time; and, indeed, who will not? No military man can permit himself to accept service with a mental reservation.\* All who are foes of his flag, and whom his country considers enemies of hers, are enemies of his; therefore, if we have war between the sections, every man who continues in "Uncle Sam's" service, is, in good faith, bound to fight his own, if his own be on the other side. The line of duty, therefore, is to me clear—each one to follow his own State, if his own State goes to war; if not, he may remain to help on the work of reunion.

If there be no war between the sections, we must hoist the flag of re-annexation, to carry the elections of '64 upon that issue, bring back the seceding States, and be happier and greater, and more glorious than ever. As soon as the smoke clears away, you will see that all the old party lines have been rubbed out. . . .

Virginia is not at all ready to go out of this Union; and she is not going out for anything that is likely to occur short of coercion—such is my opinion. . . .

Yours,

M. F. MAURY.

DEAR H.,

Observatory, April 10th, 1861.

Civil war is like a conflagration! There is no telling when or where it will stop, as long as there is fuel to feed it. So I have been thinking it might be as well to have that thing that "pestered me so" back again, or in some other shape. Pray tell me what you think, and what you advise, and if, without inconvenience, you could realise for me, and when. . . . You know that in civil war men become fiends, and there is no telling where our divisions will end. As for me, I am getting old; my life is not worth much now at any rate, and if I do get knocked over, I would like to have my little savings and scrapings where wife and children could get them. Help me think how to arrange them.

I cannot tell you anything about public affairs, except what

\* This in answer to Mr. H.'s plea that he might remain in the service, and not be forced to fight the South.

you see in the papers. But if war come, sure enough with all its horrors—as I fear it will, and that right soon—I suppose that its seat will be not far from this place.

I have no idea of what Va. will do. If “the Convention” pass a secession ordinance, it does not follow that the people will ratify it; but there is no such thing as speaking with confidence about the matter—we must wait and see, when the people have recovered from the stirring events of the last few days.

. . . . I am trying to get up an expedition to the South Pole, and getting nautical monograph No. 3 ready for the press.

My love to dear Maria and all the ladies.

Yours,

M.

It is not within the province of this biography to discuss at length the merits of the questions then at issue. But to understand the motives which influenced Maury's course, and to make them clear—particularly to such of our readers as may not be residents of the United States—it will be necessary to give a brief glance at the history of the country before the war of 1776, in which we separated ourselves from England. The thirteen colonies covering our Atlantic front were dependent upon the mother country alone. Each colony was ruled by a governor appointed by the Crown, together with a representative body, after the fashion of a parliament, of rather ill-defined local powers. So far as their political relations were concerned, these infant States were absolutely independent of each other, though bound together by ties of kindred, neighbourhood, and preservation from the dangers which threatened them—dangers from the Indian, and dangers from the French, who were enclosing them by a cordon of forts along their whole western frontier, from Canada to the Gulf of Mexico, to make good their claim to the great valley of the Mississippi.



The rupture with England came: each colony elected a governor, from among its own people, to succeed his royal predecessor, and became an independent Republic. To carry on the war, these thirteen States formed a provisional Union; and after their independence of England had been secured, and each State individually recognised by her as an independent power, the draft of the present Constitution was prepared, and submitted to the States for consideration.

In the whole of that period there was not a hint or a doubt of the right of any one State to refuse to enter the Union thus proposed; and some States did not enter it for two years after its adoption by the rest.

For the first quarter of a century, the Union was considered quite in the light of an experiment, the feelings of patriotism in the people clustering entirely around the original unit. So strong was the feeling of jealousy against the plan of Union, that, but for the immense influence of Washington, it is very doubtful whether all the States ever would have adopted it. The States delegated to the central government certain specified functions, retaining their political organization to administer upon local affairs.

Fourscore years had passed, and the issue between the Northern and Southern States culminated in secession. Whatever the merits of the controversy may have been, in point of fact those States had resumed their sovereignty. Was the fealty of a citizen due to his State, or to the creation of the State from which she had withdrawn? This was the question Maury was now called upon to decide for himself.

He had been opposed to the dissolution of the Union, feeling it to be, in the time and manner, an unwise step—remaining where he was would bring the rich harvest of fame and wealth, whose seeds he had so wisely sown—the new Confederacy could offer him no personal advantages; and yet,

believing as he did, that his duty was to his State, he hesitated not a moment to espouse her cause.\*

On the 15th of April, 1861, Mr. Lincoln issued a proclamation calling on Virginia to furnish 75,000 troops to subjugate South Carolina, and force her back into the Union. Virginia's immediate response was an ordinance of secession, and a call upon her sons in the Federal Service to rally to her support. Maury responded to this call on the 20th, and resigned his commission in the United States Navy and went to Richmond, where he was immediately appointed one of a Council of three, the other two being Judge Allen, Chief Justice of the State, and General F. S. Smith, (of the Virginia Military Institute), to advise with the Governor, Letcher, as to the best and quickest way of arming and protecting the State.

When he resigned and came to Richmond, nothing had been offered him by the Confederacy, and both the President and his Secretary of the Navy were unfriendly to him. He was opposed to the war, a peace-loving man, a student, and a philosopher; but when Virginia called, he turned his back upon his congenial scientific labours, upon all the plans that he had organized for the good of mankind, and upon his splendid discoveries and achievements, born of his genius, developed by his original mind, children of his own creation—all were sacrificed to the inexorable law of duty.

Who but one who sympathised with him, and worked with him, can tell the throes of his mighty heart at this, his greatest, noblest act of self-sacrifice!

"It is related of Socrates, that when his last hour had come, and one of his young disciples brought him the cup of hemlock, the young man covered his face with his mantle, weeping as he presented it, and, falling on his knees, he buried his face on the couch where his dear master sat

\* For Maury's views on this subject, expressed in his own words, see Appendix, "Vindication of the South and of Virginia."

awaiting his death. When Maury determined to leave the service of the United States, he bade his secretary (Mr. Thomas Harrison), write his resignation. That true and loyal heart, which had served and loved him for almost twenty years, and whose fluent pen had rendered him such willing service, refused its office now; and, presenting the unfinished paper with one hand, he covered his eyes with the other, and exclaimed, with a choking voice and gathering tears, 'I cannot write it, sir!' He knew it was the death-warrant to his scientific life—the cup of hemlock that would paralyse and kill him in his pursuit after the knowledge of nature and of nature's laws."\*

When it became known in Europe that he had resigned his place in the Federal Service, he was solicited to become the guest of Russia in the following letter from the Grand Duke Constantine, Grand Admiral of Russia, and brother to the Czar.

St. Petersburg,

MY DEAR CAPTAIN MAURY, July 27th, 1861 (August 8th).

The news of your having left a service which is so much indebted to your great and successful labours, has made a very painful impression on me and my companions-in-arms. Your indefatigable researches have unveiled the great laws which rule the winds and currents of the ocean, and have placed your name amongst those which will ever be mentioned with feelings of gratitude and respect, not only by professional men, but by all those who pride themselves in the great and noble attainments of the human race.

That your name is well-known in Russia I need scarcely add, and though "barbarians," as we are still sometimes called, we have been taught to honour in your person disinterested and eminent services to science and mankind. Sincerely deploring the inactivity into which the present political whirlpool in your country has plunged you, I deem

\* Mary H. Maury.

myself called upon to invite you to take up your residence in this country, where you may in peace continue your favourite and useful occupations.

Your position here will be a perfectly independent one ; you will be bound by no conditions or engagements ; and you will always be at liberty to steer home across the ocean in the event of your not preferring to cast anchor in our remote corner of the Baltic.

As regards your material welfare, I beg to assure you that everything will be done by me to make your new home comfortable and agreeable ; whilst at the same time, the necessary means will be offered you to enable you to continue your scientific pursuits in the way you have been accustomed to.

I shall now be awaiting your reply, hoping to have the pleasure of seeing here so distinguished an officer, whose personal acquaintance it has always been my desire to make, and whom Russia will be proud to welcome on her soil.

Believe me, my dear Captain Maury,  
Your sincere well-wisher,

CONSTANTINE,  
Grand Admiral of Russia.

Maury replied to this invitation by pleading the call of duty, which weighed with him more than personal advantage.

ADMIRAL,

Richmond Va., October 29th, 1861.

Your letter reached me only a few days ago ; it filled me with emotion. In it I am offered the hospitalities of a great and powerful Empire, with the Grand Admiral of its fleets for patron and friend. Inducements are held out such as none but the most magnanimous of princes could offer, and such as nothing but a stern sense of duty may withstand.

A home in the bosom of my family on the banks of the Neva, where, in the midst of books and surrounded by friends, I am, without care for the morrow, to have the most princely means and facilities for prosecuting those studies, and continuing those philosophical labours in which I take most

delight: all the advantages that I enjoyed in Washington are, with a larger discretion, to be offered me in Russia.

Surely a more flattering invitation could not be uttered! Certainly it could not reach a more grateful heart. I have slept upon it. It is becoming that I should be candid, and in a few words frankly state the circumstances by which I find myself surrounded. The State of Virginia gave me birth; within her borders, among many kind friends, the nearest of kin, and troops of excellent neighbours, my children are planting their vine and fig-tree. In her green bosom are the graves of my fathers; the political whirlpool from which your kind forethought sought to rescue me has already plunged her into a fierce and bloody war.

In 1788, when this State accepted the Federal Constitution and entered the American Union, she did so with the formal declaration that she reserved to herself the right to withdraw from it for cause, and resume those powers and attributes of sovereignty which she had never ceded away, but only delegated for certain definite and specified purposes.

When the President elect commenced to set at naught the very objects of the Constitution, and without authority of law proceeded to issue his proclamation of 15th April last,\* Virginia, in the exercise of that reserved right, decided that the time had come when her safety, her dignity, and honour required her to resume those "delegated" powers and withdraw from the Union. She did so; she then straightway called upon her sons in the Federal Service to retire therefrom and come to her aid.

This call found me in the midst of those quiet physical researches at the Observatory in Washington which I am now, with so much delicacy of thought and goodness of heart, invited to resume in Russia. Having been brought up in the school of States-rights, where we had for masters the greatest statesmen of America, and among them Mr. Madison, the wisest of them all, I could not, and did not hesitate; I recognised this call, considered it mandatory, and, formally renouncing all allegiance to the broken Union, hastened over

\* Calling on Va. to furnish 75,000 troops to force South Carolina back into the Union.

to the South side of the Potomac, there to renew to Fatherland those vows of fealty, service, and devotion which the State of Virginia had permitted me to pledge to the Federal Union so long only as, by serving it, I might serve her.

Thus my sword has been tendered to her cause, and the tender has been accepted. Her soil is invaded, the enemy is actually at her gates; and here I am contending, as the fathers of the Republic did, for the right of self-government, and those very principles for the maintenance of which Washington fought when this, his native State, was a colony of Great Britain. The path of duty and of honour is therefore plain.

By following it with the devotion and loyalty of a true sailor, I shall, I am persuaded, have the glorious and proud recompense that is contained in the "well done" of the Grand Admiral of Russia and his noble companions-in-arms.

When the invader is expelled, and as soon thereafter as the State will grant me leave, I promise myself the pleasure of a trip across the Atlantic, and shall hasten to Russia, that I may there in person, on the banks of the Neva, have the honour and the pleasure of expressing to her Grand Admiral the sentiments of respect and esteem with which his oft-repeated acts of kindness, and the generous encouragement that he has afforded me in the pursuits of science, have inspired his

Obedient servant,

M. F. MAURY, Commander C. S. Navy.

To H.I.H. The GRAND DUKE CONSTANTINE,  
Grand Admiral of Russia,  
St. Petersburg.

He also declined a similar invitation from France,\* because Virginia wanted him. These letters were brought to Richmond, under a flag of truce, by the Russian Minister, Baron Stacle; and the French Minister, accompanied by the Prussian Envoy, Baron Gerolt, who came, they said, in person

\* This letter has been lost.

to pay their respects and make their adieus to the "philosopher and man of science, who had given up all, everything he had save honour, at the call of his native State in her trouble."

On the breaking out of the war, when Maury moved all his family away from Washington, his affectionate kinsman, John Minor, offered his home in Fredericksburg as an asylum to the refugees. Maury responded to this invitation gratefully as follows :—

DEAR JOHN,

Richmond, April 28th, 1861.

Bless your heart for offering us shelter in these times ! \*  
There is no telling when we shall all be together again. I have written to my wife to accept your kind offer, until we can find out where we are to go. . . .

. . . . My office here, you know, is only advisory.

In haste my love, yours truly,

M. F. MAURY.

*To WILLIAM C. H., of Newburgh.*

DEAR H.,

Richmond, Va., April 29th, 1861.

When your letter reached me, I was just leaving Washington. I left my beautiful home there with a heart full and eyes overflowing on the 20th.

My little money "pesters me" mightily. Pray help me, my friend, to put money-matters in a better train. . . . But consider your discretion ample to do the best you can, and to act as you do for yourself were you going to make such a transfer; only don't go beyond the means in your hands, for I cannot meet pressing necessities here. Will you not let me make over to you out and out my St. Paul

\* He could not take refuge at Farleyvale (his son-in-law Corbin's residence), because it was too near the Potomac, and would soon be close to the enemy's lines. In fact, it was used soon afterwards as a Federal Colonel's head-quarters, and Mrs. Corbin joined her mother and sisters, and herself became a refugee.

property? When peace comes—which God grant may be soon!—I can relieve you of taxes. Kiss my Maria for me.

Your friend always,

M. F. MAURY.

*To the same.*

Richmond, May 6th, 1861.

I snatched time Saturday night to run up to Fredericksburg to see my family, who are all there except Betty, who is still in Washington—Dick, who is here—and Dave, who is at the University.

I asked John Herndon to make a deed in your favour of all my Minnesota property. If I retain it, it will, I fear, be confiscated; so if I am to lose it, I would rather you should have it than the State. . . . The mails here are so very uncertain now that I am afraid to trust anything like money through them. . . . I reckon you can reach me through Maury Bros., N. Y., should the terrible war, which now appears to be imminent, prove a reality. Of the funds in your hands, you might as well reserve say \$60 for taxes next year. . . . Now, my friend, act as though you were acting for yourself. . . . My most affectionate love and solicitude for Maria, and love also to all of your dear household.

My friend, yours truly,

M. F. MAURY.

*To the same.*

Council Chamber, Richmond, May 11th, 1861.

Yours of the 8th, with enclosures, came to hand last night. It gives expression to those deep and abiding sentiments of friendship and affection which I knew were in your heart. Nevertheless, your utterance of them is very gratifying. These are difficulties which you and I have had no part in making, and the estrangements which they are destined to create have no business to come between you and me, or yours and mine. . . . The President refuses to accept my resignation. The object of this will be plain enough to you. But in such a cause the halter has no more



terror than the bullet. Death is death. Our cause is just, and we enter the contest in. . . armour. However, I am indisposed to enter into any discussion with my friends on the other side. I grant them sincere; but I cannot but lament, in the depths of my heart and in excruciating agony, that their delusion is such as to have already allowed the establishment of a military despotism. I am sorry I have said so much; but it is done.

My most tender love for Maria and for you and yours.

M. F. MAURY.

*To the same.*

I wrote you in full this morning about the thirteen St. Paul mortgages. . . . There is nothing like excitement here. All of us are of one mind—very cool, very determined; no desire for a conflict. We are on the defensive. We have nothing to fight the North about; but if the North wants a fight, it can have it. We are ready; but the North must come to us for it.

From all I see in the public journals here, we have no idea, and never had any idea of attacking Washington, or of invading any Northern right, or Northern soil.

M. F. MAURY.

*To the same.*

MY DEAR FRIEND,

Richmond, May 12th, 1861.

I only saw last night the remarks of the *Boston Traveller* about Lieutenant Maury's treachery, his desertion, removing of buoys. It's all a lie! I resigned and left the Observatory on Saturday the 20th ult. I worked as hard and as faithfully for "Uncle Sam" up to three o'clock of that day as I ever did, and at three o'clock I turned everything—all the public property and records of the office—regularly over to Lieutenant Whiting, the proper officer in charge. I left in press, 'Nautical Monograph, No. 3'—one of the most valuable contributions that I have ever made to navigation; and just as I left it, it is now in course of publication there, though I shall probably not have an opportunity of reading

proof, and cannot tell what errors or alterations may appear. I have lost none of my interest in these enchanting fields of physical research which I have revelled in there for near twenty years. I am here to war, not against science, but against the oppressor, and for my fatherland. As for "the buoys," I touched them not! But I am here to defend the right, and will do all and everything to discomfit the enemy that is consistent with civilised and honourable warfare. A price has been set on my head in Boston. I thank them for the honour; for I do not forget that in other days a price was set upon the heads of the best men of that State, and the cause in which I fight is far more righteous than that which moved those great and good men to take up arms against their mother-country.

Yours most affectionately,

M. F. MAURY.

DEAR H.,

Richmond, Va., May 13th, 1861.

. . . . To show how I still delight in striving to do good in all proper ways, even to those who are enemies in war, but nevertheless friends in science, I enclose a bulletin of the International Exhibition for 1862, London. I am now engaged, snatching odds and ends of time, in replying to the Commissioners, and in putting the people of the Northern States in the way of an opportunity of exhibiting their handiwork there.

Yours,

M. F. MAURY.

DEAR H.,

Richmond, June 10th, 1861.

Betty and party passed safely through the lines, and arrived in Fredericksburg last week. I have just returned from the sweet old Burg. She told me all about your trip to Washington. It was a touching act of friendship which moved you to think even of a visit to Richmond. I have, you may be sure, my friend, weighed the matter well.\*

You do not see, and at present cannot, I fear, understand

\* He intended to come on to Richmond and try to convince Maury that he ought not to give up all for Va., but return to the Federal service.

our cause in its true bearings. Holy and just it is, as human cause can be, and one for which we are all ready to lay down life and sacrifice everything. I will not discuss it with you, because I might in some way wound your or Maria's sensibilities; but, my friend, believe me, my sleep is sweet, like that which the poet gives Richmond on the battle-field.

Your friend,

M. F. MAURY.

On the 10th of June, 1861, the Governor's Advisory Council was abolished, and, on the same day, Maury was appointed Chief of the Sea-coast, Harbour, and River Defences of the South. In this post he assisted in fitting out the 'Virginia' or 'Merrimac' for her short but destructive career. He also invented a most formidable torpedo to be used both for harbour and land defence, besides contributing in other ways to the protection of the Southern sea-board.

## CHAPTER XIV.

**TORPEDO WARFARE**—Maury Invents an electric torpedo for Harbour and Land Defence—Indifference on the part of the authorities—Maury's experiment—He mines the James River—Maury's plans and drawings fall into the hands of the enemy—Panic caused by fear of torpedoes in the Federal Fleet—Maury on the necessity for a Confederate Navy—The whole South arming for defence—Maury's two sons become volunteers—Col. R. L. Maury shot through the body—Lieut. J. S. Maury slain at Vicksburg.

**MAURY IN ENGLAND**—Orders from the Confederate Secretary of the Navy to proceed to England—Leaves Charleston with his youngest son—Maury organizes a society in England to promote cessation of hostilities—Petition to the United States for peace—Letter from a chronometer-maker offering Maury a home—Letters about his son at school in England, and on news from home—Congratulation to the Archduke Maximilian on going to Mexico.

TORPEDO warfare was re-introduced to the world by our civil war, and it was the practical mind of Maury which appreciated its power and developed its efficiency. The Federal Secretary of the Navy (in his Report, December 4th, 1865) stated that, during the war, their "navy lost more vessels by torpedoes than from all other causes whatever."

In pursuance of his plan for torpedo defence, Maury, soon after his arrival in Richmond, sent an agent to New York to purchase a quantity of insulating wire. The agent was foiled in his mission, and returned empty-handed.

There was neither wire-factory nor insulating material in the South, and though an establishment for the manufacture of the former was soon put in operation, yet, all the Southern ports having been placed under blockade, it was impossible to obtain either gutta-percha or india-rubber from abroad,

There was, moreover, a great prejudice against, or lack of appreciation of this undeveloped system of defence, entertained by the officials of the new Confederacy into whose hands the defence of the South had fallen.

Finally, after a year had passed in futile efforts to impress the Confederate authorities with the importance, value, and economy of mining passes and channel-ways with magazines, to be sprung at will by means of the electric spark, Maury procured, in the summer of 1862, two barrels of powder from the Governor of Virginia, who was himself in favour of the plan, and prevailed on the Secretary of the Navy, and the Chairman of the Committee of Naval Affairs in the Congress of the Confederate States, to go down the river and see him explode powder, by an ingenious contrivance, under water.

Two magnificent jets went up ; and when the two gentlemen heard the report of a barrel of powder, and saw the water pagodas rising up some hundred feet in the air, they were convinced. The next day \$50,000 were placed at the service of Commander Maury (for he now held this rank in the Navy of the Confederate States) for mining the James River.

Still powder was scarce, wire scarcer, and of gutta-percha and india-rubber there was absolutely none, except such as might be collected by calling upon the patriotic women of that noble old State for their india-rubber over-shoes ; but, by a remarkable coincidence, it happened that the enemy, in attempting to lay a submarine cable across Chesapeake Bay, from Fortress Munroe to Eastville, had been forced to abandon the attempt and had left the wire to the mercy of the waves.

Maury had the good fortune to secure the prize ; it was much cut up and broken by chafing on the rocks, but it was better than anything of the sort that could be made out of old

shoes. This flotsam was found just after the first and only attack by the Federal gunboats upon the shore defences at Drewry's Bluff on the James River.

In the summer of 1862, Maury proceeded to mine the James River below all the defences. While engaged on this important work, the success of which was to vindicate the wisdom of his advocacy of this mode of defence, his career in the Confederacy was brought to a summary conclusion.

Without having been consulted, and strongly against his wishes, he received an order to go to Europe to purchase torpedo material in conjunction with another officer—a duty that might have been performed by any junior officer in the service.

The little steamer which he used, and his torpedoes, were placed in the hands of Lieutenant Davidson, who continued in charge of these defences till the end of 1864.

Drawings and plans, with a chart of the torpedoes already planted by Maury, were left in the vessel ; and not long after, in attempting to plant others, she grounded during a falling tide, and fell into the hands of the enemy.

At that time the Federals were as ignorant regarding this means of defence as were the Southern officers ; but with these captured plans and materials they tried the experiment, “ *à la James River*,” at Baltimore on a schooner, and “blew her into tooth-picks,” as related in their official report of the transaction.

After this, there was no further attempt made by the powerful Federal fleet to disturb the shore defences of the James River, and General Lee completed them at his leisure. They gave the suspected part of the river a wide berth—till the combined attack in 1864 by Grant on the north, Butler on the south, and the fleet by water.

The fleet, while yet miles below where the torpedoes really

were, came up with cutters and launches ahead, dragging and searching for these machines and ascending at the rate of about half-a-mile a day. They caught some of the mechanical torpedoes, for there was wire enough for only a few electric ones.

Finally, after having swept over and passed with their drags one electric torpedo which had been in the water eighteen months, a fine steam corvette, the 'Commodore Jones,' was sent ahead to feel a coppice on the bank for masked batteries and rifle-pits. Davidson, concealed in a marsh on the opposite bank, with the two wires of the galvanic pile in his hand, allowed her to pass, hoping that larger game would follow. She had paused right over the torpedo and waited for the row-boats, with their sweeps and grapnels, to go ahead dragging again. Fearing that these boats might now foul his wires, he determined not to let her pass his magic line. He closed the circuit, and up she went! Engine and boilers were blown clean out of the vessel for fifty feet. The hull was shattered, and fragments of the wreck filled the air; out of a crew of 150 men only three escaped to tell the tale. It was all the work of a minute. The terror-stricken enemy stood still in his tracks, and fearing that the Confederates might come down upon him at night with their torpedo-boats, floating torpedoes, and little ironclad, he proceeded to sink his own ships in the channel, to barricade the river, and to blockade *himself* out of Richmond. There was, at this time, only one electrical torpedo in the whole river, the first planted having been washed away in a flood of unprecedented violence. The Confederates were quick to take advantage of this blunder with the barricade. They immediately mounted a battery above ("the Howlett House Battery"), which commanded it and prevented its removal after the panic caused by the fate of the 'Commodore Jones' should have subsided.

This barricade was in the bend of the river.\* In order to get round it, General B. F. Butler conceived the unsuccessful and much ridiculed plan of cutting "the Dutch Gap Canal." Thus, by a single torpedo with its powers of "moral suasion," that formidable fleet was paralysed and rendered impotent during the whole time that Richmond was beleaguered by Grant with his armies and the whole Federal host on land.

Admiral Porter confessed that, in his first attack with Butler upon Fort Fisher (at Wilmington), it was the fear of these electrical torpedoes which kept him from entering the Cape Fear River with his gunboats. He afterwards entered, found no torpedoes, and carried the place.

Every one knows the dread that sailors have of hidden rocks and sunken dangers; but when those dangers may at any time and at the bidding of an enemy burst out into live volcanoes, the idea of encountering them is simply awful.

This James River torpedo was planted on the bottom in seven fathoms of water. It was an old steam-boiler, and contained 1800 pounds of common powder. The battery used was galvanic, and the igniting arrangement was made by cutting the wire and connecting the two ends by a bit of fine platinum wire, which left a space of a quarter of an inch between the two ends of the copper or conducting wire, then lashed firmly to a bit of wood; this was thrust into a small sack filled with fine rifle-powder, which was the exploding charge; but the whole wire, battery, and bursting-charge were mere make-shifts. Much ingenuity was called into play to defend Southern harbours by means of other submarine contrivances; such as mechanical torpedoes which, when struck by a vessel, would explode by means of percussion or some other device.

\* Just below the end of Farrar's Island. The Confederate battery erected to prevent its removal was known as the Howlett House Battery, and well performed its work until the close of the war.—R. L. M.



The James River torpedoes, when planted, were daily tested. This can never be done with mechanical torpedoes.

After his arrival in England, Maury made this new method of defence the subject of patient investigation and special study. With means and appliances which the resources of that country enabled him to bring into play, a power has been placed in the hands of military men which has since assumed the proportions that he predicted.

During the first and second years of the war, Maury wrote a series of papers, published in the *Richmond Enquirer*, over the signature of "Ben Bow," urging upon the Executive the necessity of building a navy without delay, and especially of protecting our bays and rivers with small floating batteries. In the first of these articles he says:—

"At the commencement of our independence we not only find ourselves without a navy, but in the midst of war; with ports blockaded, we are shut out from the marine resources of the world. Nevertheless, we have caught up such water-craft as we could lay hands on, we have strengthened some of them as best we could, and, placing one or more guns upon each, have commissioned them into service.

"These, however, are mere makeshifts. For the most part they are fit only to contend against harmless merchantmen, and they are few in number. If we are to have a navy, surely no statesman would attempt to build it of such material.

"... The sums appropriated by the Government for 'building and increase' will indicate its policy touching a navy, and show what, for the present, is proposed to be done.

"Two Navy Bills have passed since Virginia seceded and joined the Confederacy. One was passed in May at Montgomery, and the other in Richmond in August.

"In the Montgomery Bill there is not one dime for construction or increase. The whole appropriation is \$278,500,

of which \$100,000 is for equipment and repairs. Now a navy without vessels is like lamps without oil. The Richmond Bill gives \$50,000 to buy and build steamers and gunboats for coast defence, and \$160,000 for two ironclad gunboats for the defence of the Mississippi River and the City of Memphis. . . . We may safely infer that \$50,000 will neither purchase nor build a great many steamers or gunboats, nor enable us to provide very efficiently for the defence of all the rivers except the Mississippi, and of all the harbours, bays, creeks, and sounds of our coast all the way from Washington on the Potomac to Brownsville on the Rio Grande.

“ Thus we perceive that since Virginia and North Carolina, with their defenceless, open, and inviting sea-front, seceded, the sum of only \$50,000 has been voted towards the ‘purchase or construction of a navy,’ for the defence of the entire sea-coast of the Confederacy !

“ From this analysis, and from all that we can see doing on the water, it appears that the Government has not yet decided to have a navy.

“ Does the country want a navy ? If yea, can we afford to have one ? That is the question ; and we hope the thinkers and writers and men of the country will bring to bear upon it fair minds and the right spirit.

“ The first thing to be done is to get rid of all navy notions, borrowed from the old navy at Washington, as to what constitutes a navy, to cast about us and see what resources we have, and then, considering the means and appliances which, owing to our peculiar situation, we can bring into play, to decide whether the best interests of the country call for a navy or not. In this age, when commerce is king, no nation, though it have cotton and the staples of the South for its nobles, can hope to command the respect of its peers abroad without a navy. Nor can our citizens, with such a neighbour

as we are bound to have, be secure from daily outrage unless we have a navy to protect them in peace as well as in war.

"That the country is in great need of a navy now, is patent to the world; and that it will want one in the future is obvious to every statesman. . . .

"In the first Revolution we had a navy; it did good service, and experience approves it. This, our second, is more holy than that, and our enemy is close at hand. He is marauding in habit, and far less chivalrous in disposition than the enemy we then had. Moreover, our sea-board country now, while on the one hand it is far more tempting to the robber, on the other it is far less secure from his inroads. We cannot now, as we did then, depend on distance and our faithful old allies, the wind and waves, to protect our citizens from insult and pillage. Moreover, the epoch for 'big guns and little ships' is at hand.\* Our enemy is not prepared for it. We are. Let us be up and doing, and with craft no larger than steam-tugs and pilot-boats, we may send to the bottom, or chase away from our bays and offings, his tall frigates. In the old war, none but stout ships could be sent against us, for we were separated from the enemy by the most stormy ocean in the world.

". . . . The fact that the mouths of our rivers should be blockaded with an old steam-tug, our shores ravaged, plantations pillaged, and homes burned by a fleet of mere passenger-boats, is neither gratifying to our pride at home, nor will it be held abroad as indicative of any very high degree of national spirit on our part.

"There seems then to be every reason of patriotism and policy why we should set to work 'right off the reel,' and with might and main build up a navy at least sufficient to

\* See "Scraps from the Lucky-Bag," by "Harry Bluff," *Southern Literary Messenger* of Oct. 1839.

command our rivers, bays, &c., to defend our shores, and protect our inhabitants against the enemy.

"There are a good many citizens among us who say 'cotton is king;' they hold that this king is to do all and more for us than it is possible for a navy to do. . . .

"All such are in a delusion. In the first place, cotton and the staples of the South are only some of its nobles; and unless human nature be changed, they, without a navy, will be powerless for protection. Unless we have the national ability to put forth navy strength necessary to support the dignity of the nation, its great staples will be a source of weakness, for mere wealth is weakness, and, like unprotected wealth everywhere, our commercial staples will invite to outrage and wrong.

"There seems to be a vague idea floating in the public mind of the South that, somehow or other, cotton is to enable us to do, if not entirely, at least to a great degree, what other nations require armies and navies to accomplish for them. Because cotton-wool is essential to the industry of certain people, and because we are the chief growers of cotton-wool, therefore, say these political dreamers, we can so treat cotton, in a diplomatic way, as both to enforce obedience to our revenue laws at home and secure respect to our citizens abroad. But can we? Did ever unprotected wealth secure immunity to its owner?

"In the first place, cotton becomes, when handled in any other way than the regular commercial way, a two-edged sword, as apt to wound producer as consumer. Every obstacle which we place between it and the channels of commerce here, operates as a bounty for its production elsewhere.

"It is a very current but mistaken idea to suppose that this is the only country in the world properly adapted to the cultivation of cotton. No such thing. Should even the

present paper blockade continue for a few years, and cotton rule at the present New York prices of 22 cents, or even at 15 cents, our political dreamers may wake and find the cotton sceptre, if not entirely lost to our hold, at least divided in our hand.

“Every one can see that in case the supply of American cotton to foreign markets be materially interfered with, the effect will be to enhance the value of other cotton. You will not only stimulate those already engaged in the cultivation of cotton abroad to increased production, but you tempt their neighbours into the fields, and induce others successfully to bring lands under cotton cultivation which, but for such encouragement, would never have been thought of. Our cotton interests cannot be tampered with without danger. . . .

“Suppose England and France do not choose for a few months to come to break this paper blockade, which we have not the naval strength to force, paper though it be, does it follow that that blockade, weak and ineffectual as, up to this time, it has notoriously been, will continue so until those nations get ready to act?

“The amount appropriated for the Lincoln navy during the current year is upwards of \$40,000,000. . . . We cannot, either with cotton or with all the agricultural staples of the Confederacy put together, adopt any course which will make cotton and trade stand us as a nation in the stead of a navy. . . .

“With two or three millions judiciously expended, it is possible for us to put afloat, in a little while, a navy that will give us the command of our own water. . . .

“. . . . In our present circumstances, the navy which we most require is for smooth water and shallow places. Such a one, consisting of small vessels, can be quickly and cheaply built, and, for the most part, will not be required to keep the sea but for a few days at a time.

"A shell from a rifled cannon will, when rightly aimed, tear a hole in the side of the largest ship sufficient to sink her in a few moments. . . . I do not mean by this that every shell which strikes a ship is bound to sink her. The true relation of a shell to a ship, is that of the musket-ball to the soldier in battle. . . .

"Our smooth waters and the improvements of the day enable us to send out a class of vessels that shall present little more than a feather-edge as a target to the enemy, and therefore be more invulnerable than the best shot-proof we can build. A little ship intended for the protection of Chesapeake Bay, or elsewhere in Southern waters, need not be more than twenty or twenty-five feet broad, and, with coal, crew, and gun on board, two or three feet above the water. Now, why may not such a vessel engage, at long range, with its rifled gun, the 'Minnesota,' for instance. We can shoot as far and hit as hard as the 'Minnesota.' . . .

"We, with our big gun and little ship, could watch our opportunity and always be the attacking party. Head on, we would approach the enemy on her beam.

"The cross-section of a vessel twenty feet broad and two feet out of water, measures forty feet. Forty square feet then would be the measure of the target to be presented on our side; on the other hand, the dimensions of the 'Minnesota' are not far from three hundred feet in length by twenty above the water—thus presenting a target, broadside on, of six thousand square feet, or one hundred and sixty times the size of ours. . . .

"Our necessities cry out for a navy in war; and when peace comes, it will profit us but little to be affluent and free, if we are continually liable to be pillaged by all who seek our custom. The breadth of our plantations and the value of our staples will be of small advantage if the others may have the mastery in our own waters."

"Although he argued so wisely and so well, the heads of the Government were unfriendly to Maury, and would not adopt his suggestions. But by this time the whole South was burning with military ardour. Every man was buckling on his sword, and among the rest Maury's two eldest sons, Richard, aged twenty, and John, aged eighteen, volunteered. Richard joined the 24th Virginia Regiment, participated in the gallant charge on Hancock at Williamsburg,\* was wounded at 'Seven Pines,' was promoted to lieutenant-colonel, and was shot through the body at Drawry's Bluff, from the effects of which wound he has never recovered.

"John went from the University of Virginia with the students when Harper's Ferry was seized. He afterwards went to Vicksburg on General D. H. Maury's staff; and, while making a reconnoissance alone, is supposed to have met his death, for he was never heard of afterwards.†

"Of this sad loss, his father writes in the family Bible:—  
'Our noble son, John Herndon, went out from Vicksburg, Miss., alive, on the 27th day of January, 1863, to reconnoitre the enemy. A few hours afterwards his horse was seen without a rider, but nothing was ever heard of him. From the footprints and other signs and marks on the levee, it is supposed that he was surprised by a scouting-party of the enemy in ambush within our lines and done to death. Comely in person, lovely in disposition, generous and brave, he loved right and hated wrong. Precious in the eyes of his parents, he was very dear to our hearts.'

In the fall of 1862, Maury was ordered to England by the Secretary of the Navy (Mr. Millory) to purchase torpedo material, &c. He accordingly left Richmond, accompanied by his youngest son Matthew, whom he called "Brave," a lad of some twelve or thirteen years, whom he intended to place

\* See Report of Battle of Williamsburg, by Col. R. L. Maury.

† See Appendix B: Fate of young Confederate Officer.

at a good school as soon as he should reach the peaceful shores of Old England. He proceeded to Charleston, S.C., where they were detained a week or more awaiting a favourable opportunity to leave the country on a "blockade runner." While in Charleston, he wrote the following letters to his wife :—

MY DEAR WIFE,

Charleston, October 8th, 1862.

Your short note of the 4th has just come to hand. We devoured it. "Brave" is at his lessons. He has an engagement with Mr. Godon for a buggy ride this evening, if we do not sail, of which there seems no prospect at present, for the sky is cloudless. "Brave" read me, from the "Calendar" this morning, that the moon rises Saturday night by eight. We shall certainly get off that night if not before. The 'Hero' will sail soon after, and letters sent here to go by her, care of F. T. & Co., Liverpool, may get there as soon as I do. After her, the 'Kate' will go; so tell all hands to write and keep writing, and to send their letters here to F. & Co. This house is all the time running the blockade. Their vessels generally go by Nassau, and, although by short route, are often a long time in reaching England. Still it is one of the channels of reaching me, and it should not be overlooked. I shall be most anxious to hear about the fighting at Corinth, and to learn how fared my "Davy Jones" \* and Dabney.† I am expecting a telegram from you about them, for Dabney has always been considerate in sending early tidings. I refrain from telegraphing him, because, in the first place, I do not know where he is exactly, and in the next, if either my "Davy Jones" or he have been hit, the telegraphic account would perhaps have things worse than they really are, and so I should sail and be miserable for a month or more in the absence of later information. Wherefore, I have concluded that it is more philosophical to sail thinking "all's well," and wait for letters to dispel the delusion, if delusion this be. Tot's letter, which was mailed

\* Son, John.

† Nephew, Gen. D. H. Maury.



before yours, has not been received. The stopping of Corbin with the gunboat timber looks as though the enemy was expected back in Fredericksburg. I don't want them to catch you there again. I shall leave a note behind to be sent you in case the carrier pigeon brings back word "all's well." I am thinking and dreaming about you all the time. I wrote Lucy yesterday; Elic the day before, and Tot's two days ago; also Dick and Betty and Nannie. Kiss them all, and may God Almighty bless and keep you!

After several attempts and failures, Maury and his son finally succeeded in getting off on board the 'Hero' on the 24th of October, and when they were safe beyond the reach of the Federal blockading fleet, he let fly a carrier pigeon with a note tied under its wing, to be forwarded by Mr. F., of Charleston, to his wife. The note contained the vessel's latitude and longitude and "all's well."

MY DEAR WIFE, 'Hero,' off Charleston, Oct. 24th, 1862, 3 p.m.

"Brave" and I came off in a row-boat. It was a long pull. We left at one, and are hungry. The table is set. We expect to pass the bar at eight, and pray to be clear of the enemy by eleven. We have about fifteen passengers, some of them Jews. "Brave" and I have a nice room, next to the Captain's, two berths in it. The sweetest of boys is "Brave." He has been coursing about on deck, and has come down to say, "Are you writing to ma again?" Yes. . . . With good luck we shall be in Halifax next Tuesday. I hear the steward discussing dinner. Duck, goose, potatoes, boiled mutton. Our appetite is keen. As soon as "Brave" is over with sea-sickness we will commence our studies. Tell Betty, and Nannie, and Dick, and Sue, and Will, and Corbin, and Tots, and Glum, to write me often, and tell me all the news; and do you also, my precious friend, keep me posted up in public as well as in family affairs. . . .

I shall, you know, very much wish to keep the run of public sentiment, and to be posted up in the various phases of public affairs.

Bless my Lucy's heart, I think you have had her long enough—eleven years. I wish she was here, and Tots and Glum were along when we got over the other side.

The Captain is a Scotchman. Farewell! Soup is on the table. God bless and keep us all!

Here are some rose-leaves for L., N. B., and W.

*To his Wife.*

MY DEAR FRIEND,

Halifax, U.S., Nov. 10th, 1862.

We arrived here last night after a tedious and boisterous passage of five and a half days from Bermuda. "Brave" and I both suffered more from sea-sickness than we did in the passage to Bermuda. The steamer in which we came was quite equal in dirt and all uncomfortableness to that between Calais and Dover. But, thanks be to God, here we are at last, safe and well. This is Monday; Thursday night, at two, we shall take the steamer for Liverpool, and, in nine days more, we are due in "Merrie Old England."

To-day I have been with "Brave" a-shopping, and I have bought him a suit of clothes, which are to be finished to-morrow, and a cap, two pair of flannel drawers. (It has been snowing to-day). Two flannel shirts, a purse, and two pair of gloves. When he gets his clothes he wants to have his "type" taken to send you. We have been in hot weather till now. This morning he was coasting about the room enjoying the fire, and talking about your winter arrangements, and the wood that he had stowed away for you. This is a place of 25 or 30,000 inhabitants. They are strongly "secesh" here. The Confederate flag has been flying from the top of the hotel all day, in honour, I am told, of our arrival. There is a grand review here to-day. It is the birthday of the Prince of Wales. They are celebrating it with unusual pomp, as it is his 21st. "Brave" has gone with some of the passengers to see the review. He wore his overcoat—he is collecting pictures for Lucy; he supposes Willy has collected any amount of old iron. I have let him off from his lessons to-day. This is only to tell you of our welfare; I shall send it, *viâ* Boston, and if I get the "type"

will send it the same way. The hand-organs have been grinding "Dixie" under my window all day. I sent you a box of shoes, &c., by the 'Harold' from Bermuda. It was directed to R. H. M., through F. & Co., Charleston. I have not heard that the 'Harold' has been captured, and therefore presume it got in all safe, and I hope the things reached you safely, and that each one is pleased with her share. Remember, there was no choice, and I had to take what I could get.

Please send Mr. W., of F. & Co., \$5 worth of stamps, and write him a note to say they are to pay postage on letters that I intend to send through their firm.

God bless you and us all,

M.

*To the same.*

MY DEAR FRIEND,

Halifax, Nov. 12th, 1862.

I have written you, *via* Boston, to tell you of our safe arrival and of our expected departure to-morrow night in the 'Arabia' for Liverpool, that "Brave" is as bright as a lark, and the greatest of comforts to me. He is making fine progress with his Latin. Thinking nothing of doing a page at a sitting. He has a nice new suit of clothes; has gone down now to have a little alteration made in the pants, and to have his "type" taken in them and his new cap, to send to you.

I have been received here with marked attention; I had a constant stream of callers yesterday from 10 till 4½. . . . The people here are all as much "southern" as we are.

The chances of your getting this are slim. I must content myself with few words. . . .

Accounts from Yankeedom are in by telegraph up to date. They are most encouraging to us. B. has displaced McClellan. I think hourly of Dick and Dave. Hand my letters round to the family and kin. Perhaps S. will copy them for D. and D. Bless their hearts. Love and kisses, and kind messages to Nos. 1, 1½, 2, 2½, 3, 3½, 4, 5, 6, 7 and 8, and all my good friends. I wonder where you are.

Yrs.

P.S.—We sail to-night at one.

While in England Maury carried the olive branch in one hand and the sword in the other ; for he did not cease to cry aloud and make his voice heard on the side of peace, or at least for an amelioration of the horrors of war.

He assisted in organizing a society "for the Promotion of the Cessation of Hostilities in America," which had its office at 215 Regent Street, London, and which numbered among its officers and members, leading men of the army, navy, state, and church.

They drew up the following petition (for the promotion of peace in America), to the people of the United States ; but their voice was not listened to, and the bloody strife went on.

#### THE PETITION FOR PEACE IN AMERICA.

"THE PEOPLE OF THE UNITED KINGDOM OF GREAT  
BRITAIN AND IRELAND,

"TO THE PEOPLE OF THE UNITED STATES,

"Greeting :

"We are of the same race, and many of you are our brothers. Can we not, therefore, come to you as peace-makers, and address you as friends? We would ask you, has there not been of strife and bloodshed, and misery and suffering enough ; and is it not time to cease the cruel War in which you are engaged? We believe there is not a Christian man or woman amongst us whose heart does not respond affirmatively to this question. With this conviction we wish to speak to you as plain men, using plain language. We have admired your free institutions, and have gladly witnessed your rise as a people to eminence in wealth and political power. You are of the Saxon blood, and we hoped that you would make the New World renowned for true greatness. You promised to become one mighty people and

a great nation, famed for the liberties of its citizens, the triumphs of peace, and the conquests of its commerce. We felt that you were doing honour to the Mother Country. When, therefore, this unfortunate War began, our hearts were more inclined towards you than towards your sister States, because we believed with you that the action of the South was but the work of a faction. The events of the struggle, however, have convinced us that a more united people than those of the Southern States never rose up in defence of their rights.

"When you asserted that Secession was the work of disappointed ambition, and promised to quell it within sixty days, we accepted your assurances in good faith, and looked for the speedy restoration of Peace. We did not wish to see the American Union broken up.

"But so far from this promise being fulfilled (and your efforts to accomplish it have been great), Peace and the restoration of the Union are apparently as remote as ever.

"Surely there must be many now among you who share with us the conviction that it is utterly impossible to subdue the South, or to restore the American Union, as it was in the past days of the Republic.

"You have tried sufficiently, and found the gulf between you and the Seceded States to widen with the effort that is made to subdue them.

"Is it not time then to pause, and after calmly reviewing all that you have accomplished, the distance which you have travelled from your well-known landmarks, and the difficulties and dangers that are yet before you, is it not time, we ask, that you should take counsel together as to the best means of restoring Peace?

"We cannot forget that the question of Peace or War was never submitted to you for your serious consideration before

hostilities had actually commenced ;—that they came upon you little by little ;—and that both Government and People found themselves plunged into this fearful Contest almost unawares ; nor have you as yet had an opportunity of consulting together in General Convention, for the purpose of making known your opinions and wishes about the War or any of the vast issues growing out of it.

“ The war has changed (for the present, at least) the character of your Government. What has become of the freedom of speech, your free press, and the inestimable right of habeas corpus ?

“ What, permit us to ask, are the Southern people doing beyond following the precepts and examples taught and practised by your Fathers and theirs, when they withdrew their allegiance from the Mother Country, and asserted their right to establish a Government of their own ?

“ The Declaration of Independence, which you hallow and celebrate every fourth day of July, asserts as self-evident, the right of the Southern people to set up a Government of their own.

“ But we would ask, suppose you should at the end of another three years and a half, succeed in subduing the South and restoring the Union by force of arms, might you not then find out, when it was too late, that those pillars upon which rests your form of Government had been violently torn down, and that your own liberties had been buried in the ruins ? If you will run the parallel between the South now and the Colonies in 1776, and compare the course pursued by the North now, and the Mother Country then, we think you will discover some striking resemblances ; and among them, that with you now, as with the Crown then, rests the privilege of giving Peace to the American Continent.

“ Why not then, without further delay, recognise the duty

which attaches to your high privilege? We appeal to you in the name of Religion, Humanity, Justice, and Civilisation, and believe that we shall not appeal in vain.

“Peace be unto you.”

Maury sent the petition to a cousin in America with the following letter:—

MY DEAR RUTSON, Bowdon, England, Aug. 30th, 1864.

I have this morning your package of 13, enclosing copies from Will to his sister, his mother to you, of your reply, of Corbin's to you, and reply; also one from B. C. to T. B. Also letters, *via* Bermuda; but none from my people direct. So that Will's, of July 10th, is the latest direct from my own family. Thank you kindly for them.

The enclosed petition “for Peace in America,” is what I intended to send you in my last. It takes like “wild fire” in Ireland. It was read last Sunday in many of the churches there, and it is to be offered in all for signatures next Sunday. Counting all who are represented by the societies, firms, &c., that have already signed; the signatures obtained in England represent several millions of her Majesty's subjects. It is “bread upon the waters” at best.

Please let it be known, especially if you think good may come of it. I send several copies that the public may, if you think proper, be apprised of this very important move. Liverpool only is against it.

I am quite well again; I hoped to find a report from Dick, or something later from my precious people; but I read in the absence of such, that “no news is good news.” Love to all your messmates, those on leave as well, as those at the table.

Yours,  
M.

The great American hydrographer met with much sympathy. His valuable labours and his books had secured for him a host of sincere but unknown friends. Among them

must be included the worthy chronometer maker, who expressed his feelings in the following letter:—

*To* M. F. MAURY.

From a chronometer maker, a plain English machinist.

MY DEAR SIR. Leicester, England, July 2nd, 1864.

The watch can scarcely be held in fonder remembrance than your letter, received this morning, will be cherished by me.

Devoted as my life has been to the retired pursuit of mechanical art, it is not often that I have coveted great wealth or worldly position; but there have been times when the possession of these would have enabled me to fulfil the yearnings of my inclination—yearnings that were never more strongly called into action than on your arrival in this country a year ago, when I should have been gratified beyond expression to have had the power to be amongst the first to offer a secure and suitable asylum to yourself, and as many of your family as could be snatched from the frightful war which has devastated so promising a land for the last two years; not that my sympathies were called forth on any political grounds, for whenever either side has been victorious and inflicted great injury on the other, I could only mourn for it as an injury inflicted on itself, and regard it with the same feelings as though a noble form were tearing itself to pieces during the temporary absence of reason. Whatever may be the result of the contest, it must be a source of gratification for you to know, that, although you are not now young, your life has chiefly been spent in the good work of enabling mankind to cross the ocean with less risk from the elements than formerly. I have never met with a scientific man, who did not bear testimony to the great services you have rendered to mankind.

Hoping that you will not think me presumptuous in thus addressing you,

I remain, yours truly,

G. F. LOSEBY.



The next letter, from a distinguished French scientist and relative, must have been even more gratifying to Maury's feelings :—

*To MR. M. F. MAURY.*

[*Translation.*]

At Toulouse, Paris, Dec. 25th, 1864.

MY DEAR AND HONOURED SIR,

Permit me to address you from Paris, where the care of my affairs has momentarily called me, my very sincere thanks on the subject of your immortal work. That work bears in the whole world a merited reputation, and I am proud, I avow it to you, to bear a name similar to yours. I regret not understanding the English language, so as to be able to study, in a profound manner, the physical geography of the globe, especially in the new point of view in which you have presented it. It is a real discovery, and your modesty should not allow that the publicity of your work should be restricted. You should, my dear and honoured relative, since you are so kind as to authorise me to give you a title which honours me, translate into the most popular languages of Europe, your nautical studies, the magnificent work which you have published in English science, has no frontiers, and its language should be understood throughout the world, because it is proper that all beings here below should aid each other mutually. Whatever might be the individual value of our life, is it not so short and fragile already, that we should seek with care the occasions of being useful to our fellow men? Your rare merit permits you to render great services to humanity. That surface liquid which covers three-fourths of our planet had been considered by the feebleness of our organs as a mass, awful and inert, where reigned an eternal solitude, such as that which, we believe, to exist in space. You have, sir, carried a shining light into the eternal shades, and there in the depths of the abyss you have rendered to the God of our fathers an homage which, for me at least, is worth all that which men may come every day to deposit at His feet. You have some imitators, and the furrow that you have traced gives emulation to even the incredulous.

And you have remarked already in the journals the care the European Governments take to organize their meteorological service.

You ought then, if you have not already done so, to publish in the different languages illustrated editions of your work. I say illustrated, because the cuts speak to the eyes of the multitude, and often bring to notice things passed over without notice. . . . Now allow me to express to you, at the end of one year that rolls past, and another which approaches in silence, the desire that all your holy vows be fulfilled, the hope that all your family enjoy perfect health, and that they keep constantly in the ways of our Saviour the eternal, our God; because only in these paths can they find peace and light. I wish ardently that your unhappy country may not long be torn by a fratricidal war, that you may take up the course of your useful labours, and from afar you will consider that there is one man at least who esteems you, venerates you, and esteems himself that he has known you. In these sentiments I am, my dear and honoured sir, your devoted servant, whenever you shall please to put me to the proof.

THEODORE MAURY.

The following is an extract from a letter to the Rev. F. W. Tremlett, D.C.L., incumbent of St. Peter's, Belsize Park, N.W., written while Maury was at Bowdon, England, where he resided at this time to be near his son Matthew ("Brave"), who was at school there:—

My quiet life here is like the pleasant visions of the night. Brave's sweet company at breakfast in the morning at 8; then he to school, and I to the indulgence of that last great blessing that was uttered in the gardens of paradise—work, and the will to work—till 5 P.M., in the solitude of a hermit.

When Brave's smiling face illuminates the enchanted castle for twenty minutes. He says grace before soup, takes his plate, and is back to school again from six to nine; and then the affairs of the family and nation, over a glass of milk

and a bit of buttered toast, are discussed till ten; and so to bed. . . . he rising at six. He is just now neck-and-neck with the last of the boys that had reached him by doing "voluntary" during the holidays. . . .

Our hearts were made glad, yesterday, by letters from home. The "petition" (from England to America), praying for the restoration of peace, had been received with great delight and satisfaction. My love to the ladies.

Yours truly,

M. F. MAURY.

Maury wrote to his brother-in-law, lamenting the evils that the war was bringing on his country and friends:—

DEAR BRODIE,

Bowden, England, April 22nd, 1863.

War is a great scourge, and this has touched you and me and many a good fellow with a heavy hand. As I look out upon the landscape that lies before my window, and see the men and women working in the fields, and the fields smiling to man's husbandry, when I see no marks of the spoiler, and recognise that each one is safe in his person and secure in his possessions, then it is I see peace, and think of my poor country with a sigh, and, oh, with what reflections!

"Thoughts on thoughts a countless throng," bless your hearts—you and John—for comforting, with so much solicitude and affection, my poor dear wife in her affliction! Good brothers are you both. How lovely and beautiful are the memories of my Johnny! I wonder if all parents think of their dead as I do of mine. Bless that sleeping boy! Never did he, in his whole life, do one single act that either displeased or grieved me or his mother. "He never offended." What an epitaph; and how proudly I write it! But where is the end of this war to find us—where you and yours, me and mine, and where so many that are dear and near to us? Our charming circle of relations and friends is, I fear, broken up, never, never to be restored on this side of the grave.

Where are you? You have a hospital, I know; but where do you live? Where, John? Where, Charles? Both brothers-in-law! When we are done fighting the Yankees,

we all, bald pates and gray heads, young and old, have to begin to fight the battle of life over again. Will and Corbin and Dick and my J.—no, he has got his discharge; but you and I, and ours, we all have to begin again; and at what odds! Still, the house is on fire—let's put it out; and then, when it is all over, we can see, not what's best, but what's left. So cheer up, old fellow, let's quit us like men, and trust to God for the rest!

A letter this morning from Rutson Maury of New York. . . dated 6th April. No tidings of my boy. Send it with this to his mother; it is as much to her as to you, as, indeed, are all the letters I write. Her gentleness has blessed us all, for, with God's help, it was her goodness, her teachings, and her example that made my Johnny the lovely character and faultless son that he was.

Believe me ever, dear Brodie,

Yours lovingly,

M. F. M.

His tender heart was wrung by the sufferings endured by his loved ones—at this time refugees (for the third time). He says in a letter to Dr. Tremlett, written from the Duke of Buckingham's palace at Stow:—

. . . . I had a letter to-day, of May 7th, from my daughter Nannie, and she says "Flour has gone to \$100 per barrel—too high for us—but meal is cheaper, thank God!" . . . "We had for dinner to-day soup made out of nothing, and afterwards a shin. 'Twas good, I tell you; we all dote on shins." And again, from my little Lucy, "Ham and mashed potatoes to-day for dinner; and, as it was my birthday (9th May), Mamma said I might eat as much as I wanted." Here, you see, there is no complaining, but only a gentle lifting of the curtain, which in their devotion and solicitude they have kept so closely drawn before me. With this pitiful picture in my mind's eye, I felt as if I must choke with the sumptuous viands set before me on the Duke's table. Alas, my little innocents!

## CHAPTER XV.

## MEXICO.

Maury's residence and occupation in England—Departure for the West Indies—Tidings of the fall of the Confederacy—He surrenders his sword—His son "Brave" returns home—Letter from Dr. Brodie Herndon on the condition of Virginia after the war—Maury resolves to go to Mexico—Reception by the Emperor Maximilian—Appointed Commissioner of Immigration—Explains his motives and course of action in a letter to Dr. Tremlett—The decree respecting immigration—Maury's explanatory memorandum—His scheme disapproved by friends—Letters from Commodore Jansen and General Lee—Maury's defence to his cousin Rutson Maury—Arrival of his son Richard at Mexico—Maury goes on leave to England—Mrs. Maury and her family at Liverpool—Letters from Mexico to his wife and children—An imperial dinner—Keeping house—Description of the journey from Mexico to the coast—Maury's reply to the Emperor's intimation that the immigration department was abolished—His introduction of the Cinchona cultivation into Mexico—Causes which led to the fall of the empire—Desertion of the French—Death of the Emperor—His tomb at Kenia—Melancholy fate of the Empress—Her last letter to Maury.

MAURY's residence in England was a period of great anxiety. It is true that his mind was much occupied with the perfecting of discoveries, and the conduct of experiments connected with torpedo warfare, in pursuance of the duties on which he was employed, and that the companionship of his youngest son gave him comfort, while the boy's education was a constant source of interest. But the news from the seat of war became less and less hopeful, while the separation from his wife and the rest of his family, at such a time, was hard to bear. At that time his wish was that his dear ones "should make their way into Canada, and tarry there till this vengeful strife

is over." His own health had not been good, and the doctors assured him that, by submitting to an operation, they could set him up. This he did in March 1865, with satisfactory results. Speaking of his young son, in a letter to his wife at this time, he said, "He is my constant companion and nurse in one. His manners are very soft and gentle, and he is as watchful and solicitous about my health as a mother." Soon the news came of the surrender of Lee, and the fall of the Southern cause. The condition of his beloved Virginia was indeed lamentable; but he did not receive full details of the ruin until after he had left England.

On the 2nd of May, 1865, Maury sailed from Southampton with his son "Brave," under orders from the Confederate Secretary of the Navy. He had sent out, in advance, a quantity of torpedo material for the defence of the Southern coasts and ports. This represented the results of his inventive genius, and of his studies during his residence in England; but when he arrived at St. Thomas, in the West Indies, he received the crushing tidings of the total collapse of the Confederacy, and of the assassination of Lincoln. He went on to Cuba, whence he sent his son back to Virginia. He considered it to be the wisest and most honourable course for himself, now, that all armed resistance on the part of Virginia had ceased, that he also should surrender his sword, which had been drawn by her order and for her defence. His letter stating this intention was directed to "The United States Officer commanding the squadron of the Gulf," and was by him forwarded to the Government at Washington.\*

SIR,

At sea, May 25th, 1865.

In peace, as in war, I follow the fortunes of my old native State, Virginia. I read in the public prints that she

\* Published in the *Washington National Intelligencer* of June 16th, 1865, without comment.

has practically confessed defeat, and laid down her arms. In that act mine were grounded also.

I am here without command, and bound on matters of private concern abroad. Nevertheless, and as I consider further resistance worse than useless, I deem it proper formally so to confess, and to pledge you, on my word of honour, that, should I find myself within the jurisdiction of the United States before the formal inauguration of peace, to consider myself a prisoner of war, bound by the terms and conditions which have been, or may be, granted to General Lee and his officers.

Be pleased to send your answer through my son, Colonel R. L. Maury, a prisoner of war on parole in Richmond, Virginia. In the meantime, and until I hear to the contrary, I shall act as though my surrender had been formally accepted on the above-named conditions.

Respectfully, &c.,

M. F. MAURY, Commander C. S. Navy.

To the Officer commanding the United States  
Naval Forces in the Gulf of Mexico.

In May 1865, his son Matthew ("Brave") reached Virginia, and found the Maury family assembled at the University. There were his sister Betty, with two little girls; Diana, with one little girl and a husband just returned from nine months' weary imprisonment at Fort Delaware; Sue (Colonel Richard Maury's wife), with a wounded husband and one little boy; his three little sisters, Molly, Eliza, and Lucy; his mother and her sister, Mary Herndon; his aunt Eliza, and her niece, Sally Fontaine Maury (Maury's ward), with her husband and three children.

On the 1st of May, 1865, his brother-in-law, Dr. Brodie Herndon, had written a letter to Maury from Richmond, which was not received until long afterwards. He said:—

In view of the state of the public mind in the North at present, I think it would be decidedly unsafe for you to return to this country. Your absence abroad in a semi-diplomatic

character, your prominence, and the earnest part taken by you in the cause, would make you a decided object of that "vengeance against leaders" so openly proclaimed and so plainly visible.\* In time, I hope, these vindictive feelings will subside, and then, and only then, would it be safe and prudent for you to return. A good many of the young men of the South will go abroad, and this is one of the gloomy features of our future. Dick was here last night (his wife and little boy have gone to Spottsylvania), and we had a little talk. He is implacable, and declares that he cannot live in this country. He and Betty are greatly opposed to your return. They have just written to their mother begging her to go to you. I believe sister Ann will be embarrassed in her mind to decide what to do. But I think she will try to possess her soul in patience, and wait to hear directly from you, and know your plans and wishes.

Dick's health and strength in his legs are much improved. He now walks pretty well without his crutches. You know he went with Lee, in spite of his lameness, to Appomattox Court House, and was parolled there. Since his return to Richmond, he and Sue have been the guests of Mr. B——, in whose family they have received every kindness. Will is terribly cast down; he can see no good thing ahead. His mother is here, and I reckon he will accompany her to Washington . . . . and will probably live there again. . . . It is melancholy to see the men here sadly hanging round the ruins of their places of business. Many of them have gone to work in their gardens to raise at least vegetables to eat. I can see from my window a lady—and a real lady, too—dropping corn in the garden, while her husband covers it, and another chopping wood. A few have a pig or a cow to which they look for further subsistence. The city is full to overflowing with Yankees and negroes. For the last week the armies of Grant and Sherman have been passing through

\* Mr. Charles Francis Adams, who was the United States Minister to England at this time, said to a friend of Maury's, "All his friends should advise him against going back to the U. S. yet. The feeling there is very bitter against him, and I believe the consequences of a step of that kind on his part at this time would be very unfortunate for him."



the streets—countless hosts of the best-looking and best-equipped men I ever saw. How we stood up so long against such terrible odds is a marvel indeed. General Lee is at his residence in Franklin Street, and is a great lion with the Yankees. They all want to see him. He advises obedience to the law, and that the young men shall not leave the country. It is with the greatest interest that we look from day to day to see the development of the laws of the Federal Government. We expect Governor Pierrepont next week, and the issuing of writs of election for members of the Legislature . . . . We are all dead-poor; but food and raiment can be had, I believe, by those who are willing to work. . . . The people in and about Fredericksburg have lived and are living by their cows. We expect to return to the dear old place as soon as the road is passable. Lucy was very desirous that I should stay and try my fortune here; but I am so attached to the old place that I could not be happy out of it. I love the hills of Stafford, and the little streams all round. . . . Your Dick has determined to try his fortune here. He is a fellow of most resolute purpose and determined will, and if he undertakes it, he will succeed beyond a doubt.

Sue is a capital wife, and she will work with him wherever and whenever he goes.

Corbin is the rich man of the family—and a very clever fellow is Corbin—clever in every acceptance of the word. I have a very great admiration for his character. We have never seen his baby, but hear much of its beauty and of Nannie's devotion. . . . We are all broken up; but we will not want. The old State, by-and-by, will recuperate, and her sons with her. The transition from slave to free labour will be attended with many inconveniences at first; but we will soon accommodate ourselves to our new condition. The future of the negro is a most interesting problem. I would like very much to hear your views upon these deeply interesting subjects; but I fear that it must yet be some time before I can have the pleasure of your discourse in person. I am decidedly of the opinion that you ought not to return until we see the course of events. Mr. Davis has just been captured. Mr. Hunter has been arrested. We must

keep out of harm's way until we can see more of the Northern purpose. The punishment of the leaders seems to be determined on. Those who have exercised diplomatic functions, officially or unofficially, will be sure to come in for a share of the vengeance. . . .

If I could only have you to walk up and down the room and hear you descant with perfect freedom on our prospects for the future, and the causes of our downfall, how much I would like it! The "truth is mighty, and will surely prevail" in the end; but we may say with Pilate, "What is Truth?" May God give His Holy Spirit to His people, to animate their hearts and minds and guide them aright! May He take away the spirit of resentment and hate, and give to the North and to the South the spirit of forgiveness, the spirit of wisdom and of sound mind! May He grant that we come forth from our sore trials a wiser and a better people—a nation fearing God and working righteousness! If the North deals kindly with the South, I do not think it impossible in time to heal the deep wounds that have pierced so many hearts. It took more than a generation to efface the animosities we bore England; but they were effaced.

The bloody civil war of Great Britain in Charles the First's time did not leave irremediable hate and bitterness, though Puritan and Cavalier had no love for each other.

We shall not live to see the changes in character wrought in the old dominion and the other slave States by the abolition of slavery; but our children will. We shall no doubt gain much; I am full of hope myself. . . . I believe the balance-sheet will be much in our favour.

Maury was left at the Havanna without a country or a home, and far from friends with whom he could consult. He had always felt great regard and esteem for the Archduke Maximilian, and when that excellent but unfortunate prince undertook to attempt the regeneration of Mexico, Maury had written to him, expressing his warmest wishes for the success of the undertaking. Maximilian was now at Mexico

as Emperor. Maury resolved to offer his services; and he followed the letter in person, without waiting for a reply. He reached Mexico in June, 1865.

The illustrious American hydrographer was warmly welcomed by the Emperor and Empress. They at once offered him a position in the Ministry, which he declined. The appointment of Director of the Imperial Observatory was, however, accepted by him.

In this letter to his constant friend, the Rev. F. W. Tremlett, Maury explains his reasons for surrendering his sword, and his subsequent action in Mexico:—

MY DEAR FRIEND,

Mexico, August 8th, 1865.

I have been a "looker-on here in Venice" for just two months. I came in search of country and home; for the fortunes of war have lost me both. The "Ides of May" found me, as you remember, on a voyage from happy England, that rightfully rejoices in the best Government on the face of the earth. Bound for some port—I knew not what—of the unhappy Confederacy, disastrous news from Virginia met me by the way. All was lost. But not knowing how the brave men and noble women of that gallant State would take it, and believing further resistance to be useless, I thought it becoming so to confess.

The quickest way of making my opinion known to friends at home was, though not in presence of the enemy, to lay down my arms and so inform him. I did so. The note fell into the hands of acting Rear-Admiral Sylvanus W. Gordon, of the United States Navy. . . .

Early in the war, before a battle had been fought, an unknown hand was found to have written, in the darkness of the night, upon the walls of Richmond, the words "*Væ victis!*" The time has come, and the doom is now resting upon that fair city, and spreading over a goodly land. Who that can find rightful and honourable means, would not invoke their aid for the rescue of kinsmen and friends so situated!

In contemplating this shipwreck of country, kinsmen, and

friends, I recognised among the *débris* of the wreck the very materials that are required to build, upon good and solid foundations, the Mexican Empire. Never, since the Revocation of the Edict of Nantes, has such a class of people been found willing to expatriate themselves. From such a wreck Mexico may gather and transfer to her own borders the very intelligence, skill, and labour which made the South what she was in her palmy days—except her bondage.

It would be difficult to say which have suffered, or are suffering, most—the whites from the ravages of war, or the blacks from the so-called kindness of their friends. Hoping to find for them sympathy in the heart of a generous-minded Sovereign, and an asylum in his Empire, here am I, the advocate of Southern immigration, and a humane system of African emancipation in the United States, as the quickest, most certain and best means of affording relief to their sufferings, of giving quiet to this country, stability to the throne, and peace to America.

Though many of the negroes have been set free, and, owing to the abrupt manner of closing it, have run riot, and are afflicted with both pestilence and famine, there are many of them still true to their masters. Let us encourage the owners of these to emancipate also, and then say to the former: “Now bargain with such as are willing to accompany you to Mexico as apprentices, bound to serve as agricultural and other labourers, until they can learn the language of the country, and make themselves acquainted with its customs and its laws, while they are being instructed in the cultivation of the staples that are new to them, and then emigrate with them to these fertile lands. At the expiration of this term of service—say seven years—the apprentice will have earned a home as one of the rewards of his labour, and will be able to take care of himself.

For this, I am now charged by certain of the vindictive prints of the North with “plotting” to re-open the detestable African slave-trade. The negro was set free in Mexico more than a generation ago. The Emperor, the laws, and the people are all opposed to slavery; and any one who could be so wicked as to desire to re-open the African slave-

trade, might as well attempt to "plot" with the British Government, as with this, for that purpose. Nothing seems too absurd for the sensational press of New York.

Mexico is a country of perpetual harvests. On the way from Vera Cruz to the capital, I saw corn in all its stages, from the time of its scattering by the hand of the sower, till it was gathered in the arms of the reaper. But agriculture is in a rude state. I saw them ploughing with a stick, and sawing with an axe, hoeing their corn with a shovel, and grinding it with a pebble. A few of our clever farmers, bringing with them their agricultural apprentices, would give new life and energy to the country. By sprinkling the Empire with settlers of this sort, they and their improved implements of husbandry and methods of culture would serve as so many new centres of agricultural life, energy, and improvement.

The present population of Mexico is said to be eight millions, more than seven of which belong to what with you is called the labouring classes. Yet with the richest of soils, the finest of climates, their perpetual harvests, and marvellous variety of productions, these seven millions of people contribute annually less than £7,000,000 to the commerce of the world.

The labouring classes of the South, though but little more than half as numerous as these, enabled that country to throw into the channels of commerce an amount of raw produce annually that was worth more than \$300,000,000, or £60,000,000 sterling.

You may well imagine the effect, therefore, upon the prosperity of this country, and the stability of the Empire, which would follow the introduction of a few hundred thousands of these very labourers, guided, as they should be, by the skill and experience of their former masters. . . .

Maury had thus formed a grand scheme in his mind for the colonization of a New Virginia in Mexico. He submitted his plan to the Emperor, who at once adopted it, and appointed Maury Imperial Commissioner for Colonization.

A Decree was drawn up, offering the following liberal terms to Southern sufferers from the American civil war who would emigrate to Mexico :—

“ We, Maximilian, Emperor of Mexico, in consideration of the sparseness of the population in the Mexican territory, in proportion to its extent, desiring to give to immigrants all possible security for property and liberty and having heard the opinion of our Board of Colonization, do decree as follows :—

“ Article 1. Mexico is open to immigrants of all nations.

“ Article 2. Immigration agents shall be appointed, whose duty it will be to protect the arrival of immigrants, instal them on the lands assigned them, and assist them in every possible way in establishing themselves. These agents will receive the orders of the Imperial Commissioner of Immigration, specially appointed by us, and to whom all the communications relative to immigration shall be addressed.

“ Article 3. Each immigrant shall receive a duly executed title, incommutable, of landed estate, and a certificate that it is free of mortgages.

“ Article 4. Such property shall be free from taxes for the first year, and also from duties on transfers of property, but only on the first sale.

“ Article 5. The immigrants may be naturalized as soon as they shall have established themselves as settlers.

“ Article 6. Immigrants who may desire to bring labourers with them, or induce them to come in considerable numbers, of any race whatever, are authorized to do so ; but those labourers will be subject to special protective regulations.

“ Article 7. The effects of immigrants, their working and brood animals, seeds, agricultural implements, machines, and working tools, will enter free of custom-house and transit duties.

"Article 8. Immigrants are exempted from military service for five years. But they will form a stationary militia for the purpose of protecting their property and neighbourhoods.

"Article 9. Liberty in the exercise of their respective forms of religious worship is secured to immigrants by the organic law of the Empire.

"Article 10. Each of our ministers is charged with carrying out such parts of this Decree as relate to his department.

"Given at Chapultepec on the 5th day of September, 1865.

"MAXIMILIAN."

Commander Maury, the Imperial Commissioner of Immigration, prepared the following memorandum, to be published with the Decree :—

"The Government not only invites all well-disposed persons to come and assist in the occupation of its vacant lands, but His Majesty the Emperor, touched by the spectacle of good men struggling with adversity in other lands, tenders hospitality and homes especially to these.

"Moved by the generous impulses of his nature, he offers them material assistance to enable them to reach this beautiful land. To those of them who wish to change their skies, make Mexico their homes, and identify themselves with the country, a free passage by sea for their families and effects is offered.

"To those who have lost all their substance, is offered, not only a free passage by sea, but a travelling allowance of a real the league thence to their new homes will be made for each member of these families, counting as members also their apprentices or labourers.

"Agents for immigration will be stationed at convenient points abroad, for the purpose of affording information to the immigrants there as to the country, its lands, the best way

of reaching them, and upon all other subjects appertaining thereto."

He also added the following general remarks to accompany the Decree:—

"In connection with the foregoing Decree, I beg leave to add, for the information of those who are disposed to avail themselves of the very liberal terms offered by it, a few remarks upon the physical geography, the agricultural resources and industrial pursuits of this beautiful country.

"The Empire of Mexico lies between the parallels of 15° and 32° north latitude, and its shores are bathed by the Gulf of Mexico and the Caribbean Sea on the one hand, and by the Pacific Ocean on the other. It is celebrated for its mines of gold; copper and lead also abound. Though its mineral wealth has dazzled the world, its mineral wealth is, as a source of riches, by no means equal to its soil.

"Its climates are genial, and its harvest perpetual; under good husbandry the yield is bountiful, being fifty, one hundred, and sometimes two hundred-fold. On the way up from Vera Cruz to Mexico I saw the cereals in all stages of cultivation.

"The seasons in Mexico are not marked by the vicissitudes of heat and cold, but by wet and dry. The coldest time of the year in this city is about the end of the dry season in April or May. In the Tierra Caliente the rainy season is the sickly season. Between the mountains and the sea there is on both coasts a flat country varying in width from ten to fifty miles or more.

"These lowlands reach back to the mountains, which form the edge of the table-land or great central plateau. The low country corresponds to that which in Virginia and the Carolinas lies between the blue ridge and the sea. It is the hot country of Mexico, the Tierra Caliente. Everything



which delights in rich soil, bright skies, warmth, and moisture, finds a genial habitat there.

"Ascending the mountains, which are timbered all the way up, you reach the table-land, an immense plain from 5000 to 8000 feet above the level of the sea, and hundreds of miles in breadth. In length it is commensurate with the Empire, and in the lap of its western declivities lies the *Tierra Caliente* of the Pacific coast. This table-land is the *Tierra Templada*, or the temperate region of the Empire. Its climates are delightful—a happy mean between heat and cold.

"The surface of this table-land is diversified with hills and dales, with an occasional snow-clad peak, so that in descending to the valleys, one may find, at a difference in level of only a few hundred yards and in the distance of a few miles, the productions and staples of all countries and latitudes, from those of Virginia down to those of the Gulf of Mexico, and thence through the West Indies to the equator or Brazil.

"Immigrants for Mexico, come at what season they may, will always be in time to plant something. But the best season for planting is generally in the spring, and the best time for coming is in the dry season, from October to May, when the new-comer may live in tents, put his seed in the ground, and have time to build and get his family comfortably housed before the rainy season sets in.

"The staples of agriculture are, in Mexico, as diverse as its climates: there is no lack of range and pasture for cattle, horses, and sheep; nay, gentlemen who are from the grazing lands of the Western States, and who have travelled through the Northern part of Mexico, assure me that they have never seen so fine a sheep-country."

The course adopted by Maury, in entering the service of Mexico and attempting to form a colony of Virginians in

that country, did not receive the concurrence of his friends either in Europe or in America.

Commodore Jansen, of the Netherlands Navy, the lifelong friend of the great hydrographer, wrote to him from Delft, on the 22nd of July, 1865, as follows :—

Your family, I hear, intend to join you either at Halifax or in England. From this I conclude that they do not expect any result from your Mexican scheme—neither do I; and I hope by this time you are in the steamer on your way back to England. The people of Virginia have shown themselves to be as brave as any people ever have been; but courage is coupled, in patriotism, with perseverance in suffering until better times come for Virginia. All who love her for what she has been and what she has done, ought to love her enough to suffer with her and for her sake. If the best people, who have made Virginia what she is, desert her at this critical moment, it would be like children leaving their mother in distress. There is no virtue without sacrifice, and, if the Virginians possess the virtue of patriotism, they ought to bring her now the sacrifice of pride. Don't emigrate! Stand by your country with stern courage; learn the patience to bear without shame and with all the dignity of self-command.

. . . . I don't think that you can return now to Virginia; but, in three or four years, great changes will take place in opinions, and you, nor your family, won't find a country which would be able to give you anything like her sympathy, or to take Virginia out of your hearts and souls. You ought to go back to your dear State as soon as you can do so safely; and if you had followed my advice you would never have left England, but would have asked Madame Maury to join you there.

After a long journey and great inconveniences, perhaps suffering in your health and mind, you'll come back without gaining anything but a sad experience.

Even if the Emperor Maximilian would listen to you and encourage you in your scheme, I should say don't do it, my friend. We have been able to raise money enough for the

"testimonial" to buy you an estate in Virginia. "Brave" can be, under Nannie's husband's guidance, your farmer. He is young and intelligent, and has not suffered during the war like Dick, and consequently he has not so great a hatred in his blood. You and Madame Maury, with your little darlings and Dick, can stay here till the time comes that you can go back in safety, enjoying no public, but a farmer's life, in ease and comfort, giving the world the benefit of your genius. A man of sixty years of age does not commence a new life, and can do no good in a new sphere of action. God grant my prayer that you may soon be back in good health among your friends in Europe!

Your friend,

JANSEN.

The heroic General Lee held the same views as Commodore Jansen. He wrote the following letter to Maury on the subject of the colonization of the empire of Mexico by planters of the South :—

MY DEAR CAPTAIN MAURY,

Sept. 8th, 1865.

. . . . We have certainly not found our form of government all that was anticipated by its original founders; but this may be partly our fault in expecting too much, and partly due to the absence of virtue in the people. As long as virtue was dominant in the Republic, so long was the happiness of the people secure. I cannot, however, despair of it yet; I look forward to better days, and trust that time and experience—the great teachers of men under the guidance of our ever-merciful God—may save us from destruction, and restore to us the bright hopes and prospects of the past. The thought of abandoning the country, and all that must be left in it, is abhorrent to my feelings, and I prefer to struggle for its restoration, and share its fate, rather than to give up all as lost. I have a great admiration for Mexico: the salubrity of its climates, the fertility of its soil, and the magnificence of its scenery, possess for me great charms; but I still look with delight upon the mountains of my native State. To remove our people to a portion of Mexico which would be favourable

to them would be a work of much difficulty. Did they possess the means, and could the system of apprenticeship you suggest be established, the United States Government would, I think, certainly interfere; and, under the circumstances, there would be difficulty in persuading the free men to emigrate. Those citizens who can leave the country, and others who may be compelled to do so, will reap the fruits of your considerate labours; but I shall be very sorry if your presence will be lost to Virginia. She has now sore need of all her sons, and can ill afford to lose you. I am very much obliged to you for all you have done for us, and hope your labours in the future may be as efficacious as in the past, and that your separation from us may not be permanent. Wishing you every prosperity and happiness,

I am, most truly yours,

R. E. LEE.

The decided opinions of so many good and thoughtful friends made it very difficult for Maury to trust the path which he was pursuing. He was still in the full belief that he was right, and he continued to be sanguine that his scheme of colonization would succeed, as long as he remained in Mexico. His most constant correspondent was his cousin Rutson Maury, of New York. Although they had taken different sides in the war, their friendship remained unimpaired. It was to this cousin that Maury most fully explained his side of the question. He said:—

There are a few friends, and you are one of them, that I should like to impress now (for time will tell, if I live long enough) with just conceptions of my present endeavour. The war is over, and there is an end. It has made great changes, and I prefer not to live under the rule of the victors. Without any motive of hostility to them, without any thought whether they would like or dislike the move—for it is none of their business—I have come here to provide a home for such of the conquered people as like to emigrate. Suppose they do not thank me—well, there is still useful and honour-

able occupation for me here. There are many things here with which I may identify myself and do good, such as organizing the census, a land-survey for the Empire, a system of internal improvements; and though last, not least, the introduction of chinchona cultivation.

In October 1865, Maury's son Richard, with his wife and little boy, arrived at Mexico to assist his father in the work of his department, and to take his place when he should be on leave of absence. Colonel Richard Maury had been severely wounded in the war, but he was able to be a great help to his father. "He surprises me," writes Maury, "by his business habits, tact, and capacity."

Having obtained leave of absence from the Emperor to visit his family, Maury left Mexico on the 24th of February, 1866, arriving in London in the end of March. When he departed, emigrants were crowding to his "Carlotta Colony," at Cordova, and "everything looked as fair and smiling as possible for my day-dream." Mrs. Maury, with her young family, had arrived at Liverpool in November 1865, and had sent young "Brave" to school, employing masters for her daughters.

The following letters to his wife and children are interesting. They describe the Imperial Court, Maury's domestic arrangements in Mexico, and the country between the capital and Vera Cruz.

On Sept. 12th, 1865, Maury wrote from Mexico to his wife as follows:—

I never tire of writing to you and my children; it is my comfort, my happiness, and consolation. I hope this will find you all safe and sound in England. Yesterday I received a large batch of back-letters—one from "Brave," reporting his arrival in Virginia; one from Eliza, blowing me up for coming here; two from Dick, one from Betty, and three from you, with any amount of press copies from others, which

good Rutson thought would give me pleasure and satisfaction.

Rutson is like my uncle Toby, and has a heart twice as big. He has been very kind to me and mine, and I praise and thank him daily in my heart in the silent hours of the night. This package gave me reading for two days; the day it came I dined at Chepultepec. The Emperor has a palace there; he dines at 3.30 P.M. There were present the Empress, and one of her ladies, four German naval officers, and a Mexican—all were of his household, I believe. It was mail-day for Europe; the Emperor had been busy at the palace writing (he told me) seventeen letters for the steamer. I got there a moment before he did, so he went into the sitting-room which joins the Empress's chamber. He opened her chamber-door and said "Carlotta, here's Mr. Maury." She came out immediately and commanded me to be seated, the Emperor and the other gentlemen standing. Presently her lady-in-waiting came in; I rose, but she touched me gently on the arm and said, "The Emperor wishes you always to be seated." The lady stood also. In a few minutes dinner was announced. The Emperor led off, and we all followed in single file. As I passed through the door, one of the "aids"—a baron—whispered in my ear, "On the Empress's left." The dinner—excepting the wines, the number of servants, and the liveries—reminded me very much of those Lucy Ellen\* used to give us in our summer visits to Fredericksburg.

After dinner (say three-quarters of an hour) we, the gentlemen, led by the Emperor, went into the smoking-room. Gilt cigars were handed round; the Emperor did not smoke. Here he drew an arm-chair up into the corner, and seated me again, he and the others standing until their cigars were nearly finished. Then he took a seat, and commanded the others to be seated. Despatches were handed him, some of which he handed to me to look into. Presently he dismissed the gentlemen, and said, "Mr. Maury, you have something to say to me?" "Yes, sire; I can't manage immigration through the Ministers. I must transact business with you directly, and not through them; nor must they have

\* Mrs. Maury's sister-in-law.

anything to do with it." "That's what I intend," said he. Said I, "I have not seen my wife and children for three years; I want to be quick, organize immigration, and take the steamer of 13th November for France." "Certainly," said he. Then he said, "I wish you to continue the conversation with the Empress; I have something pressing to do. She will make notes, give me verbal explanations, and have it all ready for me by four o'clock in the morning, when I will attend to it." Carlotta was walking in the garden. He referred me to some books on the table, and went to look for her. She came, and we commenced discussing matters, she making notes nearly as fast as I could talk. Among other subjects, I mentioned that of an office; that I had sent for Dick and family, who would be the first immigrants under the Decree, and that a house had been offered me which would answer the purpose of an office and a dwelling as well. "Certainly." Then we discussed with approbation my going to see you; the appointments of agents in the South and their salaries, and the organization of a land-office. She is very clever, practical, and business-like. I told her I thought she could do more business in a day than all of the Ministers put together could do in a week. She said, "I believe I could." She told me she had recently received a letter from the Empress of France about me, and enclosing a copy of a long letter I wrote in June to Admiral Chabanne about my new "Virginia," commending the plan as a grand idea, and asking Carlotta if she did not know me. . . .

16th.—I shall take the house, servants and all, which the Soulès have been living in, at say \$150 per month. This will be for office, and for Dick and me. The Soulès are fourteen in number; they live extravagantly. I shall not; and the cost of living, including servants, is twenty-eight cents a day. I want to get Dick a place with a salary of \$2500 if I can. This arrangement will enable me to contribute \$3000 towards your expenses in England, leaving \$2000 for helping the other children, supporting myself, and paying my way to "wife's house." How is it now, that all my friends, except Dick, will say I am crazy to come here?

"The Decree" has been injured in the translation. It is

not as good for the State or the immigrants as I drew it. Still, the papers proclaim it to be the most important act of the Empire. See then how much more desirable and honourable my position here, than it would have been in Russia or in France! Here I am in the category of a benefactor; there I should have been almost a pensioner of charity. If I can find here a home for my people, assist to build up a good and stable Government—of which there are reasonable grounds of hope—and surround myself by my family and friends, surely goodness and mercy will have guided me all my days, and my cup will be run over. Now, compare this prospect with the plan that Rutson, in his good heart and clear head, had chalked out for me. He urged my stay in England, and that I must wait till I would be allowed to return to the United States. In four years, perhaps, I could return with diminished health and energy. I can go back just as well from here as from England if I should find it desirable so to do. It is true, all my friends—save Dick and doubting little Nannie—have been of one mind against me. Events seem now to bid fair to vindicate the propriety of my course. Now will you not let me bring my Molly back with me? She can return to you with me when I make my next visit; and then my Eliza, if she will be diligent at school, will take her place; and then the next time you and my little Loo will come. . . .

I want to arrange it so that Dick can take my place here while I am gone. . . .

I am so afraid that noble spirit of firmness and of resolution, which has borne you up so manfully since we parted, will give way under trial after trial to which I am subjecting it. But then you know how children must be educated, and there are no schools to speak of here.

Of course you will seek and take Tremlett's advice whenever you are at a loss for a counsellor. Suppose I can't get off in French steamer of 14th November, what shall I do? Come in December and return in March, or come in April and return in September? I want to take my Lucy to the pantomime! Love to all friends, and kisses to the children. God bless you my love!

M. F. MAURY.



*From MAURY to his Wife.*

MY DEAR WIFE,

Mexico, Sept. 23rd, 1865.

My heart is as big as a mountain and as heavy as lead. Your letter is so sad at leaving friends behind and going to a strange land. This is Saturday night. Perhaps you sailed to-day, for the line of steamers in which I wanted you to go sailed Saturday. I received ten days ago your letters up to the 14th. You were then just making up your mind to come here, and my letter telling you to go to England would take you so by surprise. The last mail brought me many letters from you and the children. I shut myself up, threw myself on the bed, and wept and read and wept and read all day long. 'Twas night before I got through them.

Perhaps you'll feel better when you get to England. There you will not hear such constant discussions as to the wisdom of my course, and the propriety of your coming here; and that, I am sure, will be a great relief. Moreover, the sacrifice is for the benefit of our children. There they can go to good schools, and I can come and see you. If you stayed where you are, you could have neither; if you come here you must do without the schools. So you see you are in the path of duty, and the reflection that it is so will comfort and console you, I am sure. Yesterday I received my appointment as Director of the Observatory here; and to-day my naturalization papers, which qualify me to hold office.

My salary is \$5000 to commence with June last. Last night I submitted—by request—estimates for my staff and office. . . . Dick and family, I suppose, will sail from New York on 8th, and be here about this time next month. I shall strive to interest Dabney's friend, General Wilcox, also, the Talcotts, in them, so that I may not leave them friendless in a strange land, when I come to see you; also Miss Scarlett, a nice lady, the daughter of the British Minister.

I came to our new house the day before yesterday, and am now housekeeping. It is a nice house. I have one-half of the upper storey, the Talcotts the other—or are to have. The

houses here, you know, have no chimneys, and they have a large yard in the middle. My side of the parallelogram is nearly one hundred yards long. I have a very large parlour, dining-room, kitchen, and six other rooms, two of which I shall use as an office when I am put in charge of immigration. The house is ready-furnished. This arrangement will make it cost me about \$50 per month, leaving about \$3000, which will be a smart allowance for you and the children for the year. I am by no means sanguine about my "New Virginia"; not but that there are plenty of people in the South who are dying to come. I know more about that than you do, for there are now about one hundred first-rate men, some of them with their families, from various parts of the South, looking for homes. Some of them have been sent by their neighbours and friends to look at the country and report. The Government is not yet prepared to offer them lands on any terms. We are not ready. Some of them have gone home in disgust, and the golden, precious moments are passing by. I am not yet in harness; but if I can't carry colonization, this is no place for me. And this the Emperor also understands, for I have told him I could not stay if immigration fails. At any rate, I now almost despair of seeing it well in motion before this time next year. But this will give me a long time with you and those precious children. I am so proud of them. Their praises, coming from the heart, are more than music to my ears. 'Tis joy and comfort to my heart. Bless their sweet hearts! Tell them to study and be good and true. "Brave," I know bears himself like our son, and a man. He is a noble boy. Hug him six times, and kiss him twenty for me.

I have been entertaining visitors, and reading over again that sweet budget of letters—especially yours—all day. How I do wish I could take all care from you, and make you happy! . . .

But, my dear sweet wife and noble mother of our noble children, what can I do more than I have done—and I am doing—to show myself worthy of you and of them, and do homage to the great ambition that I have to deserve your and their praise and love? . . . You know what brought me

here. I did hope—and still hope—to help to repair the ruin that was made of the most righteous cause and noble people that ever suffered the shipwreck of almost all that it is dear. I may yet succeed in that. But I may fail, and if I do it will not be because I spared myself or forgot your happiness. . . .

It becomes me to try this to a conclusion; it becomes me to use whatever power for good I may have acquired in the world for the benefit of this people, who have suffered in the same cause with us, and who are so near and dear to us. Nay, my sweet companion and friend, it becomes me to be up and doing, especially while our good friends—Tremlett, Jansen, and others—are so kindly exerting themselves on my account. How would it have done for me, instead of trying myself to do something, to have folded my arms—as Rutson and others suggested—until the Federal authorities would have permitted me to come back—to what? To poverty and misery; and that too while Tremlett was undergoing the fatigues and expense of that journey to Denmark, Sweden and Russia on my account!

No; rely upon it, my sweet friend and partner, that in coming here I have done the wisest and the best thing that under the circumstances, I could do.

Mexico, September 27th, 1865.

The plan for you I fancy most is to go where there is some good school for girls. Take nice lodgings where you can entertain your friends, or where the girls can receive theirs. Let your landlady supply your meals, and so relieve you of the housekeeping. You will be mighty lonesome, I fear; but you are in the path of duty, and you will find consolation in that, and in watching for my coming, which will not be long delayed, I can assure you. Last night I went to the Opera. This is the third time, and a very good Opera it is. I am often invited. . . .

I reckon you will sail next Saturday, the 30th. You were preparing to quit, October 1st, anyhow. You got my letters telling you to go to England on the 10th. Your preparations then would not be much, and the longer you tarried the longer the voyage.

This goes in the English Minister's bag, and will reach you on the 20th or 29th of October, I reckon. I saw the Empress yesterday, and arranged about my office and a land-office, at the head of which I asked her to place Magruder,\* with a salary of \$3000, which she did.

He will probably have a large force of surveyors under him, all or most of them Confederates. . . .

Keep up your spirits, my dear wife.

Your affectionate

"COUSIN."

*From M. F. MAURY to his Wife.*

Office of Colonization,

Mexico, Nov. 27th, 1865.

MY DEAR WIFE,

Dick is a great help and comfort to me. Bless his heart, he wins upon me every day : so crippled yet so patient, so devoted to his new duties, and so hard-working, he surprises and delights me with his business tact and capacity. He is so handsome too, and in his new clothes looks, as he is, every inch a gentleman. He was consulting me to-day about buying some Cordova lands. I have it in my mind to bring Corbin here and induce him to settle upon them ; and though I believe he and Nannie would come, if I had urged them, yet, in the face of so much opposition, I had not the heart to do it.

In the olden times, Cordova was the garden spot of New Spain. There stands on one side, and but a little way off, the Peak of Orizaba, with its cap of everlasting snow, and on the other the sea in full view. These lands were heavily in debt to the Church, and as the Church property has been confiscated (not by the Emperor, though) Max. took possession of these lands for colonization. The railway hence to Vera Cruz passes right through them ; and I am now selling these lands to immigrants, as fast as they can be surveyed, at \$1 the acre on 5 years' credit. There are about 40 of our people already there. Perkins has bought himself a house and has sent for his family ; so has Shelby, and so have a number of

\* General C. S. A.

others. Mr. Holdham, an Episcopal clergyman, with his family—nice people—has been engaged by the settlement as pastor and teacher. I am going to reserve land for a church, cemetery, and school-house. Thus, you see, my sweet wife, colonization is a fact, not a chimera. By the time these lands are paid for they will be worth, even if no more settlers come to the Empire, \$20, \$30, or even \$100 the acre, for they produce everything under the sun, and yield perpetual harvests.

What do you think of coffee growing wild, of fig-trees 100 feet high and three feet in circumference, and the most luscious pine-apples at a cent apiece?

Now, if I can get Corbin here on one of these old Haciendas, he would, with his skilful husbandry, make it bud and blossom again. There is a great rush for this settlement, and it is here that Dick wanted to go; but as he was my son, I advised him against it, because there are not lands enough there for all who want them. However, I am going to extend the settlement, and then Corbin and Nannie can come in, as well as Dick and the rest.

Lafayette Caldwell, who used to be draughtsman at the Observatory, has sent for his family, Newmarket for his, and there are a number of nice families already there, some of them established in the city; but those are all going to break up and go down to the new, dear old Spottsylvania.

Now, if I can only get lands surveyed in time—for there are plenty of them—here is your “New Virginia.” There are other settlements forming in other parts of the Empire. Colonization is a success, if we can only get instruments and surveyors to bring the land into market. The people of the South are restrained by political considerations from speaking of their intentions; but we have letters. Thousands are dying to come; and I hope to have a decree this week which will put them in motion.

28th.—My hands are getting so full, and my time so liable to interruptions, that I cannot write as often or as fully as I used to do; but my heart is always full of letters to you—piled up, pressed down, and running over with loves, and the most tender solicitude. . . .

He wrote to his children, on the eve of his departure from Mexico :—

MY DEAR CHILDREN,

Vera Cruz, March 1st, 1866.

The English steamer in which I have paid my passage (49 pounds and 10 shillings), is now overdue ten days, and her day for sailing again is the day after to-morrow. I left Mexico on Saturday the 24th at 3 A.M.; arrived at Puebla at 7 P.M., where I pernocted in a room with divers others for \$2; was called at 1 A.M., and off again at 2, over a very rough road—a very fatiguing journey. Passed between long hedges of the lordly Maguey, shooting up its magnificent stems or stalks, as large and as high and as straight as a common telegraph-pole. Indeed, unless you are near enough to see the wires, I found it often difficult to tell the one from the other. This pet of Flora's, with its enormous height and proportions, is pushed up in the course of 6 or 7 days.

To compare small things with great, imagine an enormous asparagus-stalk—say one day old, and before it had swelled out sufficiently to begin to burst and shoot out branches—and imagine it to be 18 or 20 inches in circumference, and 30 or 40 feet high, and you have the Maguey, as I generally see it, rising from its magnificent tuft of foliage 30 feet round and 12 feet high. Occasionally the more forward ones had commenced to shoot out from the top, and horizontally, their splendid flower bracts. The coach ascended the slopes of the Cumbres, the highest range between Mexico and the Gulf; we left the "Court of Bacchus," and entered the cloud region. It was blowing a furious gale; the wind was howling among the rocks and cliffs, and driving a cold and penetrating mist through a white darkness so thick that you could see nothing beyond the distance of a few feet. It was piercing cold. I had on three flannel shirts; but as we began to climb, I began to draw around and button up, and finally found myself wrapped in cloak and blanket and uncomfortably cold. Presently we dropped down through the thick cloud right into the bright sunshine, and the loveliest view that it was possible for the heart of man to conceive. There was

the lovely little valley of Aconcinga at our feet, and spreading out miles away into the plains of Orizaba, which are 4000 feet above the sea. This valley was quilted over with smiling crops in all the stages of growth, from the sprouting corn to the ripe grain. The reapers were in golden fields of the yellowest and the brightest barley I ever saw. The wheat was just coming up, and immense herds of cattle, as they fed on the rich pastures, lent a charm to the landscape that made it altogether lovely. Passing a cascade of milk-white foam as it leaped from the mountain, we entered the valley, and felt what old Job had said about the "scent of water." We were in the midst of fruits and flowers—orange-trees loaded with ripe fruit and the peach-tree in all its glory of blossom, hedges, and copses of roses. Oh, a wilderness of the loveliest flowers and the gayest colours, and such only as, I used to think, had never grown anywhere except in the garden of "Beauty and the Beast!" And it, too, has its beast—for 2 months ago it had been here in the shape of an earthquake, and had shaken down the adobe huts of the village, which the owners were reconstructing of bamboo-reeds, palm-leaves, and hides. After passing through these beauties for 12 or 15 miles, at 6.30 P.M. we drove into Orizaba in the midst of a rain-storm. Coffee, tobacco, the cereals, and the banana, with other fruits, seem to be the chief articles of cultivation. Here I pernocted again, in another menagerie, when, as before, there was little chance for sleep. I was called at 5, off at 6, and at 10 breakfasted at Cordova, and at 2 arrived at Paso del Macho; there I pernocted again, as unsatisfactorily as before; and the next day, at 6, started in the cars for this place. Total expenses, \$45.50. The \$5.50 being spent for extras, such as a cup of chocolate or so, between the early hour of starting and the late one of breakfast.

Two ship-loads of immigrants have just arrived. Sheridan had refused to let them embark at New Orleans,\* as he was "determined to break up that Maury nest of Confederates which was agitating the public mind of the South, and

\* The U. S. Secretary of State required that all Southerners who applied for passports to Mexico should take an oath *never to return*.

preventing the people there from quietly submitting to subjugation." I thank him for the encouragement. We are going to have happy times, a fine country, and a bright future here. Dick has got land in my Carlotta Colony—640 acres; he has sent to China for labourers—12 or 15—to work it, and to Virginia for young Crutchfield to take charge of it. I have such good irons in such good fires, that some of them will surely be got to welding heat.

No sooner was Maury's back turned upon Mexico, than his enemies, and the enemies of the Empire and of Maximilian, brought such pressure to bear on the ill-fated Emperor that he was forced to abandon the colonization policy of Maury and to abolish the Department of Immigration. Just one month after Maury's departure, the Emperor wrote to tell him that their cherished plans and golden day-dreams must be abandoned. The following was Maury's reply:—

*To the EMPEROR OF MEXICO.*

SIR,

London, July, 1866.

I read, in your letter of April 19th, fresh proofs of your Majesty's confidence and friendly consideration; I am touched by them. I am grieved to learn that your Majesty should be compassed with difficulties so serious as must be those which made it necessary to abandon such a cherished policy as I know that of colonization to have been. . . .

Colonization being suspended, I fear that my return to Mexico would tend rather to increase the embarrassments than to smooth any of the difficulties by which your Majesty is surrounded.

This fear, my solicitude for the welfare of the Empress and yourself, and the deep concern I feel for your success in one of the noblest undertakings that ever animated the human breast, make me pause. . . .

In stating this conclusion I hope I may not be considered unmindful of obligations or insensible to kindness. Far from it. Proof that I recognise both in their highest sense is found in the fact, that in homage to them I forego the high



and honourable position so kindly offered me near the person of your Majesty in the service of your Empire.

Connected with this subject, I beg leave to report, that of the sum placed in my hands for the purchase of seeds and instruments a balance will remain. H.B.M.'s Government has kindly ordered chinchona seeds from India, because they were required for your Majesty's service. Defraying the cost of their transportation out of this fund, I shall be glad to account for it, and pay over the balance due to any person here that may be designated.

That God may ever have your Majesties in His holy keeping is the constant prayer of your earnest well-wisher and humble friend,

M. F. MAURY.

*From the EMPEROR.*

Palace of Mexico,

MY DEAR COUNCILLOR MAURY,

Aug. 16th, 1866.

It was with pride that I heard of the scientific triumph just achieved, and due to your illustrious labours. The Transatlantic cable, while uniting both hemispheres, will continually recall to their minds the debt of gratitude they owe to your genius. I congratulate you with all my heart, and I am pleased at announcing to you that I have appointed you Grand Cross of the Order of Gaudeloupe.

Receive the assurance of the good wishes of your very affectionate

MAXIMILIAN.

Maury succeeded in conferring one permanent blessing on Mexico, by introducing the cultivation of the febrifuge-yielding chinchona tree. Before leaving England in 1865, he had conversed with Mr. Clements Markham on the subject, who is the introducer of chinchona cultivation into British India. Maury had compared the forest-covered slopes above the Tierra Caliente, with the eastern slopes of the Andes in Peru and Bolivia, which are the native habitat of the chinchona, expressing his conviction that the trees

would flourish in Mexico, and his anxiety to introduce their cultivation. Mr. Markham fully concurred, and pointed out to Maury that Baron Humboldt long ago remarked, with surprise, the presence of all the principal plants in the Mexican forests which are found in the chinchona region, and the absence of the chinchona itself. Mr. Markham, who had established the chinchona plantations in British India, was then in charge of all matters relating to them at the India Office. He promised to arrange that Maury should be furnished with a supply of seeds, and wrote out to India to cause the necessary arrangements to be made. In August 1866, he forwarded three parcels of chinchona seeds to Maury; and steps were at once taken to form a plantation near Cordova. In December it was announced that the seeds were germinating satisfactorily, and Mr. Markham addressed the following official dispatch to Commander Maury:—

SIR,

India Office, May 17th, 1867.

With reference to my letter of the 15th of August last, forwarding three parcels of chinchona seeds for transportation to the Mexican Government, I have the honour to transmit, by direction of the Secretary of State for India, fifty copies of a pamphlet on chinchona cultivation, in the Spanish language,\* for the guidance of those who have been charged with the management of chinchona cultivation in that Empire, and of those who may hereafter undertake the cultivation.

Sir Stafford Northcote† has received the intelligence contained in the letter from the Secretary of the Mexican

\* This pamphlet was compiled by Mr. Clements Markham, not only for the use of Mexicans, but also of Peruvians, Bolivians, and Columbians who might undertake chinchona cultivation. He wrote it in the hope that it would prove useful to his South American friends, and as some slight return for the kindness and hospitality he received from them while engaged on the duty of making collections of chinchona plants and seeds in South America.

† Then Secretary of State for India.

Society of Geography and Statistics, dated the 11th of December last, that several thousands of chinchona seeds sent from Madras according to your instructions have germinated satisfactorily in the Mexican Mountains, with much gratification.

I have, &c.,

CLEMENTS R. MARKHAM.

To Councillor M. F. MAURY.

The Mexican chinchona plantation was established near Cordova, under the superintendence of Señor Nieto. It has continued to flourish.\* If Maury did no other good by his short residence in Mexico than was involved in this valuable service, who can say that generations yet unborn will not bless his name for the rich benefits conferred on the Mexican people by the introduction of this inestimable febrifuge?

To understand the position of affairs in Mexico it will be necessary to refer to the powerful influences which were being brought to bear upon her at this time by the United States. France had availed herself of the opportunity presented by the American civil war to try the experiment

\* In June, 1866, a supply of chinchona seeds, consisting of 120,000 of *C. succirubra*, 90,000 of *C. Calisaga*, and 25,000 of *C. officinalis*, was transmitted from the Nilagiri Hills, in Southern India, to Mr. Markham in London, and immediately forwarded to Mexico. A site was selected for planting them at Cordova, about 3000 feet above the sea; and Señor Nieto was appointed to take charge of the undertaking. Señor Nieto received the seeds on October 14th, 1866, and sowed the greater part of them in wooden boxes filled with good soil, and protected by glass and light movable curtains. The rest were distributed to Mr. Finch of the Hacienda Potrero, Don F. M. Sanchez Barcena of Jalapa, Mr. Grandison of Orizaba, and Don Carlos Sartorius of the Hacienda Mirada, all intelligent planters. In November, 1871, Mr. Markham, who was in regular correspondence with Señor Nieto, sent out a second supply of seeds, which arrived at Cordova on April 25th, 1872. A plantation of chinchona trees was established near Cordova, and Señor Nieto worked on steadily, through much discouragement, until his lamented death in 1874. Samples of the chinchona bark from Mexico were exhibited in the International Exhibition of Philadelphia in 1876.

of substituting an Imperial for a Republican form of Government in the Aztec land. Maximilian sat on the throne of the Montezumas, and was striving to restore the country to peace and prosperity under the shadow of the wings of the eagles of France.

It was not, however, part of the policy of the United States Government to allow the establishment of such a power on its southern frontier. While the civil war lasted no other contest could be undertaken ; but the aspect of affairs was entirely changed after the fall of the Confederacy ; and the United States Government peremptorily demanded from Napoleon III. that his troops should be withdrawn from Mexico. The Emperor of the French was far too shrewd a man to persist in a course which, owing to the unexpected success of the North, had ceased to be profitable. He caused his army to evacuate the country, leaving the Emperor of Mexico to his fate.

Maximilian became fully aware of the deadly peril of his position. He persuaded his faithful wife to visit France and Austria, on the ostensible plea of negotiating a loan from either or both Governments, but really to remove her out of danger. He was surrounded by foes and false friends, and without a soul he could trust or a friend on whom he could rely, among the Mexicans. He was finally taken prisoner—through the treachery of one of his generals—at Queretaro, in May, 1867, and shot on the 19th of June following. After long delay, his remains were delivered to the Austrian Admiral sent by his brother to receive them, and were finally interred at Vienna with those of his ancestors. Maximilian had given up his position in the Austrian Navy, and abandoned the pleasures of his home in the charming palace of Miramar from the purest motives. He laboured hard, and devoted all the resources of his cultivated mind to further the welfare of his adopted country. The remains of no nobler

and braver prince have their resting-place in the tomb of the Hapsburgs.\*

The afflicted Empress, on her arrival in Europe, entreated Napoleon III. to send aid to her husband in Mexico. Finding her appeals of no avail, she was overwhelmed with such intense grief that reason forsook its throne. Maury was deeply affected by the sad fate of these friends, involving the destruction of all his beneficent schemes for the good of Mexico. The last letter he received from the unfortunate Empress Carlotta enclosed photographs of herself and of the Emperor Maximilian.

\* The following description of the vault under the Capuchin Church in Vienna, which is the last resting-place of the Imperial House of Hapsburg, was furnished by a friend of the author, who visited it in 1881 :—

“We were admitted by a long and gloomy descent. The monk in attendance first showed us with his candle the oldest tombs, which are richly decorated. In the centre of the principal chamber is the stately double sarcophagus containing the bodies of Maria Theresa and Francis I. Surrounding them are the bodies of her fourteen children. The coffin of Maximilian, Emperor of Mexico, occupies an adjoining recess. The position seems to have been specially chosen, and the sarcophagus is a handsome one. It is still covered with wreaths; and many similar tokens of respect and love hang on the wall over it, with inscriptions. They are sympathetic offerings of members of his family and of great men. Upon the lid there rests a silver wreath of palm-leaves, placed there by his unhappy widow.”

## CHAPTER XVI.

IN ENGLAND, 1866-68.

Maury's arrival in England—Meeting with his family—The Maury testimonial—Instructing French officers in defensive sea-mining at Paris—Maury's Electrical Torpedo School—Defence of Wurtemberg by electrical mines—Maury's memorandum on the use of electrical torpedoes—Writing class-books on geography—Visits to Nottingham and to Wrottesley Hall—Arrival of his daughter, Mrs. Corbin—Maury's love for his grandchild—He joins the Church and is confirmed with his children—Made LL.D. at Cambridge—Accepts appointment as Professor at the Virginia Military Institute—Returns to America—Occupations at Richmond.

MAURY arrived in England—from Mexico—on the 29th of March, 1866. His wife and children had come from Birkenhead to meet him in London, and they were once more united at No. 30, Harley Street. But Maury was so completely altered by the sorrows, hardships, and anxieties of the years of separation, that none of his children knew him. His youngest daughter exclaimed when, he entered his wife's room—"This is not my papa! This is an old man with a white beard!" He had lost all his property in the States, and the failure of a banker caused him the further loss of all the money he had brought from Mexico.

The services of the great hydrographer to mankind were not, however, forgotten by his friends and his numerous admirers in Europe. A "Maury Testimonial" had been set on foot, and subscriptions to it were actively promoted by Commodore Jansen and by Dr. Tremlett, who visited

Holland and Sweden for the purpose of making its object known. Naval and scientific men in England and other countries also came forward. On the 6th of June a banquet was given in his honour at Willis's Rooms, and the illustrious American was presented by Sir John Pakington,\* who presided, with the "Maury Testimonial," consisting of a purse containing 3000 guineas in a handsome silver-gilt casket. Among the many distinguished men who were present on this occasion, were the Mexican, Danish, and Argentine Ministers; General Beauregard, of the Confederate Army; Earl Nelson; Admirals Sir John Hay, Halstead, and Young; Captain Cowper Coles, R.N.; General Sir Henry Lefroy, R.E.; Colonel Sir Henry James, of the Ordnance Survey; Commodore Jansen, of the Netherlands Navy; Admiral Boulaker, of the Russian Navy; Captain Klerker, of the Swedish Navy; Lord Richard Grosvenor, Mr. Beresford-Hope, M.P., Mr. Charles Babbage, General Walker, Professor Tyndall, Mr. J. Laird, M.P., the Rev. F. W. Tremlett, Honorary Secretary of the Testimonial Fund, the Hon. J. B. Vivian, and many others.

Almost immediately after his return to England, Maury set to work with his electrical torpedo; and during May and June he was in Paris, where he was employed by the Government of Napoleon III. His duty—for which he received suitable remuneration—was to instruct a board of French officers in his system of defensive sea-mining. He displayed before the Emperor the power and capabilities of the torpedoes which he had planted in the James River four years before. The French authorities were delighted. At St. Cloud, the Emperor himself made the circuit and exploded a torpedo, and Maury was invited to become a Frenchman, and accept service under Napoleon. "But," he wrote, "I would

\* First Lord of the Admiralty 1858-59 and 1866-67; afterwards Lord Hampton.

much rather find occupation in the civil avocations of Old England."

On his return to London, Maury opened a school of instruction in electric torpedoes, and Swedish, Dutch, and other officers went through his courses between June and August, 1866. For this work he was adequately remunerated by the different Governments whose officers received instruction.

The following letter on the subject was addressed to the Consul-General for Wurtemberg, on the 30th of June, 1866:—

SIR,

30, Harley St., June 30th, 1866.

In reference to our conversation this morning, concerning the electric torpedo as a means of defence in war, I beg leave to state that I introduced it, on the side of the South, in the late war in America, and that the Federal Secretary of the Navy in his last Report (Dec. 4th, 1865) states that in that war their navy lost more vessels by torpedoes than from all other causes whatever; that in 1862, I mined the James River with them; that they destroyed every Federal vessel that attempted to pass them, and kept that powerful fleet at bay during the siege of Richmond by General Grant; that since that time I have made the study of them a speciality, and by a course of investigation and experiment have made such improvements in their use and application, both by land and water, as to take away the superiority over the defence which rifled guns, hollow shot, and ironclads appear to have given to the attack. Confining my remarks to the land, it is in the power of the military engineer to mine the way before an invading army, and to spring volcanoes under its feet at will.

With small cost, and at short notice, the mountain-passes and strongholds of Wurtemberg may be so effectually defended from invasion and attack as to drive an enemy back, or keep him at bay. The operator need not be stationed near the scene; he may be at the distance of several miles when he discharges the exploding spark. He can explode by



the same touch, and instantaneously, any number that may be required.

He can at any time send a telegraphic message through his wires, and feel that the powder is dry and assure himself that all is well.

I have demonstrated the principles of this new means of defence, to one of the most powerful nations of the world,\* and it has been decided to introduce it there. I am now doing the same for others.

I have the honour to be, respectfully,

Your obedient servant,

M. F. MAURY.

To the Consul of H.M. the King of Wurtemberg.

A copy of the following paper was given to the Swedes, one to Russia, one to Holland, and one to France. All these powers, and others, had sent agents to be instructed in the use of the Maury electrical torpedo for harbour, coast, and land defence.

"July 28th, 1866.

"We have treated of the electrical torpedoes under water; before treating of them on the land, I beg to say a few words as to torpedo-boats and mechanical torpedoes, or those which explode by striking or catching against a vessel. The torpedo-boats used by the Confederates generally carried their torpedoes—say forty pounds of powder—at the end of a pole rigged out some twenty feet over the bow of the boat, and inclined downward so as to strike the enemy five or six feet at least below the water-line. Experiments showed that when the torpedo was exploded at three feet the men were liable to be blown out of the boat. In this plan the charge was ignited by the striking of the torpedo against the enemy, which set off a percussion, or broke a phial of acid, so arranged within as to ignite the charge.

\* France.

"A torpedo-boat of steel, 33 feet long, was built at Mobile and sent to Charleston by rail. She was intended to go under the water and to carry a crew of nine men—one to manage, the others to propel. Under favourable circumstances she was expected to go four knots and remain below thirty minutes, coming to the surface at pleasure. Her plan was to run under the vessel and tow the torpedo after her, which, on coming in contact with the side, would explode.

"Lieutenant Payne and eight others volunteered to attack the blockading fleet off Charleston with her. As they were just ready to put out, the swell of a passing steamer sunk her, and all hands, excepting Captain Payne, were lost. She was raised, and he volunteered again, when, by another similar mishap, she was swamped again, and all hands except himself and two others were drowned.

"She was raised again, and sent round into the smooth water of the Cooper River for experiments in diving and coming up again. Her commander was on her. He and eight others went down in her and were all drowned. She remained at the bottom several weeks, and then was raised and fitted up again, under the command of Lieutenant Dickson, of the Confederate army. With her he attacked and sunk the sloop-of-war 'Housatonic'; but neither he nor any of his daring companions were ever heard of again.\*

"The best torpedo-boat, however, that was planned in the Confederacy, was a steam-gig built of steel, light and strong, calculated to hold five men, to go ten knots, and to carry coal enough, without provisions, for a night. Instead of carrying her torpedo—and she could carry several—at the end of a spar, she carried it over her bow. Her bowsprit was eight feet long, and so arranged, that when the enemy was struck it would

\* For a more full and interesting account of torpedo operations against the enemy in Charleston Harbour, see 'Military Operations of General Beauregard,' by Col. Roman, 2nd vol., pp. 181 to 184.

come in against a spiral, thus acting as a buffer, and by firing a gun which would send a shaft, to which the torpedo was made fast by a cord several feet long, into the side of a ship. Thus, the torpedo would be left hanging; thence a cord or wire, some fifty or sixty feet long, with one end attached to the torpedo, the other to the boat, served to explode the charge as soon as the boat got out of the way, and brought it taut; the explosion being effected either by electricity or by the pulling of a trigger.

"The war ended before any of these boats were ready. They might answer very well against wooden ships. Another plan was prepared very early in the war, but was never tried. The torpedo was to be in the form of a fish, with its tail lashed to one side to serve as a rudder; it was to be towed astern by a long line in which were the conducting wires. Being thus towed by a swift steamer past the enemy, the effect was that the torpedo would be sheered off broad enough to strike, when it would be exploded by an electric discharge. I am not aware that any attempt was made to put this idea into practice.

"In July, 1861, the Federal fleet, then lying off Fortress Munroe, was attacked with floating torpedoes. They were in pairs, connected together by a span 500 feet long. The span was floated on the surface by corks; and the torpedo-barrels, containing 200 pounds of powder, also floated at the depth of twenty feet; empty *barregas*, painted lead-colour so as not readily to be seen, serving for the purpose. The span was connected with a trigger in the head of each barrel, so set and arranged that when the torpedo, being let go in a tide-way under the bows and athwart the hawse had fouled, they would be drifted alongside, and in so drifting tauten the span and so set off the fuse, which was driven precisely as a 10" shot fuze, only it was calculated to burn 54", because it could not be known exactly in which part of the sweep along

tide the strain would be sufficient to set off the trigger. The torpedoes were launched at three fine frigates, the 'Minnesota,' the 'Roanoke,' and the 'Cumberland' (the blockading fleet off the mouth of the James River).

"Finding that they all missed, I attributed it to the fact that such a fuse could not burn under a pressure of 20 feet of water. The conjecture was confirmed by experiment. The fuse could burn very surely at the depth of 15 feet—never at 20 feet.

"Some time afterwards those torpedoes were discovered by the enemy. Spans, barrels, and *barregas* were soon got up, and carried off as relics.

"The enemy prevented any further attack in this way by dropping the end of his lower studding-sail boom in the water every night, anchoring boats or beams ahead, &c. The first vessel destroyed by a torpedo was the 'Quaker City'—I think that was the name—in the Yazoo River. This torpedo was an old demi-john filled with powder, planted in the channel-way, and having a string attached to a friction-tube leading to the shore; the observer, with it in his hand, being concealed on the bank. She came; he pulled, and down she went.

"After this hasty sketch, I come to electrical torpedoes for guarding mountain-passes and roadways, &c., for the protection of strongholds and the defence of fortified positions. Shells cast for the purpose should be used, but in an emergency tin canisters, or any other perfectly water-tight cases, will answer. I am not aware that electricity was used by either of the belligerents in the late American war for springing mines on land.

"The cases for land-torpedoes should be shells cast expressly for the purpose. The thickness of the shell being from one-fourth to an inch, and even more, or less, according to the size and the probable handling in transportation.

“They should be spherical, only, instead of a hole for the fuse, as in a hollow shot, they should have a neck like a bottle, with a cap to screw over—not in—the neck. The case should be charged through the neck, and the wires let in through two holes, counter-sunk, diametrically opposite, the counter-sinking being for the purpose of receiving pitch or other resinous matter to keep the water out. The fuse, being adjusted to the wires, should be held in its place by a string through the neck, while the wires are drawn out taut and sealed within and without. Having proved the fuse, first fill and then drive in a wooden peg. Then fill the space between it and the screw-cap with red lead, and screw down tight so as to make it water-tight. Now secure the tails of the wires so that they will not be chafed or bruised, and the mine is ready to be packed for transportation. They are generally to be used in stone fugassees, the wire being buried at convenient depths, and all marks of fugassees and trenches removed as completely as possible. Any number, not exceeding twenty-five or thirty, may be arranged in a single circuit for the ebonite; but if the magnetic exploder of Wheattstone be preferred, and the ground be perfectly dry, hundreds may be planted in a ladder-circuit, which you have been handled.

“The operator may be at any distance from these mines when he explodes them, provided only he has established some mark or point which, on being reached by the enemy, should serve as his signal. The area of destruction of one fugassee, properly constructed, with a charge of twenty or twenty-five pounds of powder, may be assumed to be that of a circle seventy-five or eighty yards in diameter. Twenty mines would therefore serve for a mile. Several miles may be planted in a night, and the assailants may be enticed or invited out in the morning. Passes before an invading army may be mined in advance, and thus, if he cannot be destroyed,

his progress may be so retarded by dummies or sham mines as almost literally to compel him to dig his way.

"The power to telegraph through these torpedoes is of little consequence, inasmuch as there need be but one station and one operator. Using the testing-fuse manufactured by Abel, and a weak voltaic current, the operator can at any time satisfy himself as to continuity. Thus bridges and gulfs or breaks are not required for the land as they are in sea-mining. Ebonite has the further advantage on land that it takes but a single wire.

"Forts may be protected against assault, and your own rifle-pits from occupation by an enemy, simply by a proper distribution of these new engines of war. They may be planted line within line, and one row above another, and so arranged that volcanoes may be sprung at will under the feet of assaulting columns.

"The only attempt that was made in the late American war to bring the electrical torpedo into play on the land, was made by the Confederates at Fort Fisher, in 1865, just before its fall. The narrow land-spit over which the attacking party had to advance was mined. The officer in charge used the magneto exploder.

"But the mines would not go off, owing no doubt to defective arrangements, for the instrument was new to him, and he had not been posted up as to the virtues of the ladder-circuit. The instrument used on this occasion was just such a one as this before you. It was the first that had reached the Confederacy. Here is then a most striking illustration of the importance of previous study and drill in this new and important arm of defence."

Maury was also very fully occupied in the preparation of a series of geographical class-books for the use of schools. While he was in Paris he had received a letter from Mr.

C. B. Richardson, a New York publisher, proposing that he should undertake this series; and a suitable arrangement having been made with him, Maury set to work on this new employment in good earnest. In August, 1866, he wrote: "I am hard at work on Geography No. I., 'Brave' drawing the maps. Well, I could not wind up my career more usefully (and usefulness is both honour and glory) than by helping to shape the character and mould the destinies of the rising generation." In the following month the family moved into cheaper lodgings in Clarendon Terrace, where Maury continued to work hard at his Geography Series, receiving advice and assistance from his friend Jansen, and this work fully occupied him until the end of the year. In 1868, he was also writing a popular book on astronomy, which, however, has never been published. His industry at this time, as throughout his useful life, was indefatigable. During September 1866, Maury and his daughters were at Nottingham, for the meeting of the British Association, where they received a hearty welcome and cordial hospitality; and they also paid a pleasant visit at Wrottesley Hall. "Brave" was pursuing his studies at the School of Mines.

At about this time Mr. Corbin lost his house at Farley-vale, near Fredericksburg by fire; and Maury asked his daughter, Mrs. Corbin, to join him in London. She came with her little girl; and while she was staying with her parents her eldest son was born—an Englishman, and duly registered as one. He was named, by his grandfather, John Herndon Maury, after the gallant young uncle who was lost at Vicksburg. This little boy afterwards became a great pet with his grandfather, and it was touching and lovely to see these two friends together. The child only survived his illustrious grandparent ten days. "Lovely and pleasant were their lives, and in death they were not divided."

Although Maury had always been a devout Christian, it was not until this year that he became a regular member of the Church. He was confirmed, with his son Matthew ("Brave") and his young daughter Lucy, by Dr. Quintard, the Bishop of Tennessee, who was then in London attending the Pan-Anglican Assembly at Lambeth. The ceremony was performed in Dr. Tremlett's church at Belsize Park, and it was a beautiful and touching sight to behold that bald head bending in lowly adoration between the two glossy young brown ones he loved so dearly.

In 1868, the degree of LL.D. was conferred on Maury by the University of Cambridge, in recognition of his literary and scientific merits, and of his eminent service to mankind.

He went accompanied by his wife, his daughters Molly and Lucy, and the Rev. Mr. Tremlett. They were all guests of the Vice-Chancellor.

Alfred Tennyson received his degree on the same occasion, and so did Max Müller and Mr. Wright (translator of Egyptian manuscripts and hieroglyphics at the British Museum). There was a long oration, in high-sounding Latin, made by the Dean to the four newly-made "learned Doctors," each dressed in his University gown of bright red cloth lined with pink satin, and with their "mortar-boards" on their heads. Then the undergraduates, who filled the galleries, gave three cheers, and proceeded to make whatever remarks they chose in loud tones on the dress and deportment of the LL.D.'s, and of the audience generally, greatly to their embarrassment, of course. "You should take off your hat, old gentleman!" and "Did your mother forget to call you early?" &c.; one called for three cheers for "the girl with golden hair," and another professed loudly his admiration for "the girl with the blue bonnet," till all were more or less rapped over the knuckles.

The following is a translation of that part of the Latin



oration which introduced Maury; it is followed by extracts from his daughter Molly's diary kept at the time :—

“I present to you Matthew Fontaine Maury, who while serving in the American Navy did not permit the clear edge of his mind to be dulled, or his ardour for study to be dissipated, by the variety of his professional labours, or by his continual change of place, but who, by the attentive observations of the course of the winds, the climate, the currents of the seas and oceans, acquired those materials for knowledge, which afterwards in leisure, while he presided over the Observatory at Washington, he systematized in charts and in a book—charts which are now in the hands of all seamen, and a book which has carried the fame of its author into the most distant countries of the earth. Nor is he merely a high authority in nautical science. He is also a pattern of noble manners and good morals, because in the guidance of his own life he has always shown himself a brave and good man. When that cruel civil war in America was imminent, this man did not hesitate to leave home and friends, a place of high honour and an office singularly adapted to his genius—to throw away, in one word, all the goods and gifts of fortune—that he might defend and sustain the cause which seemed to him the just one. ‘The victorious cause pleased the gods,’ and now perhaps, as victorious causes will do, it pleases the majority of men, and yet no one can withhold his admiration from the man who, though numbered among the vanquished, held his faith pure and unblemished even at the price of poverty and exile.”

“ . . . When this address was finished, an official on the left of the Vice-Chancellor came down from the dais, and, taking papa by the left hand, led him up to the Vice-Chancellor, and introduced him in Latin. The latter, taking papa's right hand in his, held it while he welcomed him, in a

short but appropriate speech, as a Doctor of the University of Cambridge; after which the new Doctor took a seat on the left of the Vice-Chancellor. Then came the other three I have already spoken of, and then came nearly forty, in black-silk gowns and furred hoods, who were to be created M.A.'s or B.A.'s. They knelt down before the Vice-Chancellor one by one, and put up their hands like a child saying its prayers; the Vice-Chancellor put his hands outside theirs and said in Latin, 'By the right of my office and the power invested in me, I create you Master of Arts or Bachelor of Arts (as the case might be) in the name of the Father and the Son and the Holy Ghost. Amen.'

"..... Papa presently introduced me to Mr. Adams, the Astronomer-Royal (the man who predicted the planet Neptune at the same time that Leverrier did). He went with us and Mrs. Vice-Chancellor to the FitzWilliam Museum that afternoon, and afterwards invited us to a strawberry-feast in his garden."

In 1868 the political objections to Maury's return to his native country had been removed by the enactment of a general amnesty. He had been offered the Directorship of the Imperial Observatory by the Emperor of the French, and the Superintendency of the University of the South at Suwanee; but he declined both. He had accepted the Chair of Physics at the Virginia Military Institute. The buildings at Lexington are in a line with the Washington and Lee University, over which the illustrious General Lee presided as Rector. This fact had no small influence in Maury's choice of Lexington for a home, so highly did he appreciate the pleasure of a renewal of the friendship which existed between them as neighbours in old times, when one lived at the Washington Observatory, the other at his country-seat of Arlington. The two houses were in full view of each other,

with the River Potomac flowing between them. General Lee always earnestly wished that Virginians should not leave their country, but work for her in adversity as in prosperous times. As regards Maury, that noble and patriotic wish was now gratified.

MAURY'S COMMISSION TO THE CHAIR OF METEOROLOGY AT THE  
VIRGINIA MILITARY INSTITUTE.

*The Virginia Military Institute to M. F. MAURY, LL.D.*

GREETING :

Know you that, reposing special trust and confidence in your virtue, intelligence, and great qualifications, the Board of Visitors of the Virginia Military Institute, by virtue of the authority invested in them by law, have appointed you Professor of Meteorology.

Given under my hand, as President of the Board of Visitors and under the seal of the State, this 22nd day of February, 1868.

JOHN LETCHER,  
*President of the Board of Visitors of  
Virginia Military Institute.*

Seal.

Maury accepted this appointment in the following letter to General Smith, of the Virginia Military Institute :—

*To GENERAL F. S. SMITH, of Va. Military Institute.*

GENERAL,

London, April 21st, 1868.

I thank you kindly for your letter of the 3rd inst., explaining my duties in the new Chair. They, being such as therein defined, you have induced me to accept.

I should lack courage to undertake a regular course of lectures as one of the faculty, simply because it would lead me into an untried line of life ; and as my rule is to put my heart into whatever I attempt to do, and try my best, I

should have to work overmuch—especially at the beginning—and I am afraid of that. The consideration, therefore, that I am not to be charged with a class, or expected to deliver a regular course of lectures, removes a “sea of troubles,” and leaves me in a field of research in which I am not altogether a “raw hand.”

. . . . You certainly do draw a very bright picture of the work that is before me\*—of the results that are expected from it, and of the success that is to attend my labours.

We do not weigh in the same balance the force that I can bring to the work. Therefore, as bright as your picture is, I have my fears of what there may be on the other side. “Still, it’s wise and brave to hope the best,” and, bringing willing hearts and ready hands to the work, we’ll try to rub even the dark side bright, should it be turned towards us.

I have some private matters to attend to, previous engagements and obligations to meet and satisfy, which may prevent my being with you in June.

Will not your field-parties lack instruments? If you have the funds, had you not better make known your wants while I am here? Loseby—who Brooke will remember as my “crack” chronometer-maker—has invented a pocket-barometer that will give you orographic features, as you ride about the country, with much nicety. With it you can read difference of level by the way as you read time from the face of your watch. A dozen of these barometers—say at \$12 each—would be invaluable.

Yours truly,

M. F. MAURY.

Maury bade a reluctant farewell to many warm friends whom his talents and misfortunes had drawn around him. He took the steamer at Liverpool with his family, and arrived at New York early in July 1868; but his house at Lexington was not ready for him until the beginning of the following year. He went to Richmond in August, and thence,

\* Physical Survey (and Report) of Virginia.

with his daughters, to the White Sulphur Springs, intending to devote the autumn to a study of the climate and productions of Virginia, with a view to the preparation of a report on its geographical position and commercial advantages. At that time the people of Holland were in great hopes that Flushing, with improved facilities for ships, would become an important commercial port. Maury received a proposal for establishing a line of steamers from Flushing to Norfolk in Virginia, and he welcomed the idea as likely to confer great benefits on his beloved native land. This gave a fresh spur to his ideas connected with an industrial and meteorological survey of Virginia.

On the 10th of September, 1868, Maury was duly installed in his Professorial Chair at Lexington; but he was not able to begin his residence until the following year. He spent the winter at Richmond, occupying himself with a preliminary report on the material wealth and resources of Virginia, and entertaining bright hopes from the new direct line of steamers which Commodore Jansen was striving to establish between Flushing and a Virginian port. By the spring of 1869, Maury and his family were established in their house at Lexington.

## CHAPTER XVII.

Description of Lexington—Maury settled in his last home—Virginia the best route to the North-West—Scheme for a map showing a caste of the atmosphere—Reaches his sixty-sixth birthday—Arrangement to deliver addresses—Meteorological survey of Virginia—Resumes his lectures on agricultural meteorology—His address delivered at Nashville, St. Louis, and Richmond—In delivering his lectures on weather forecasts for farmers Maury overtaxed his strength—Maury comes home to Lexington to die—His last illness—The last scene—His death—Sketch of his character—Particulars of his last days—Quotation of a notice in *Temple Bar*—His wishes respecting his obsequies—Lines by Mrs. Margaret Preston on his body passing the Goshen Pass on its way to Richmond.

LEXINGTON is a small town, beautifully situated on the western side of the Blue Ridge, with picturesque views of valley and mountain-ranges on every side. The academical buildings are erected in a continuous line, facing a green expanse of grass, interspersed with clumps and lines of trees. Nearest the town are the edifices connected with the Washington and Lee University, including the house of the Rector, where General Lee passed the last years of his life, the library and class-rooms, and houses of professors. A little in advance is the memorial church containing the noble recumbent statue of General Lee by Valentine, the great Virginian sculptor. The grounds of the University are only divided from those of the Military Institute by a gate and iron railings. Here is the house occupied by Maury, with a bright and cheerful landscape in full view from its windows. the house of the Principal, General Smith, and the main

building of the Institute with the marks of injuries, wantonly perpetrated by the federal invaders, still visible on its walls.

Here, surrounded by old friends, and free to work at the pursuits which were most congenial to him, Maury passed the last four years of his life with his wife and family. At last he had found a haven of rest; but his busy and untiring brain continued to be as active as ever in devising schemes for the good of his country, as is evident from the following letter:—

Virginia Military Institute,  
Lexington, June 13th, 1867.

MY DEAR FRANK,\*

Here we are in our new home, busy fixing up; and things begin to know their places. So we also begin to have a home-feeling. People are very kind, the country is beautiful, the views and the scenery lovely, and both climate and air such that exercise is enjoyment. How I wish I had you and Miss Louisa here with us! Nannie and her two children are now on their way to us—by sea—from New York. Dick has gone to West Virginia. Brave is polishing off at the Institute.

The seat of Empire is fast settling down in the North-West States. They already give the Presidents, and will soon dictate the foreign policy of the country. They must have a better way to the sea. They have been taught to believe—erroneously—that the best way lies through Canada and the St. Lawrence. It does not; it lies through Virginia.

You will appreciate my feeling upon this subject, when I remind you that grain is sent round Cape Horn from California, and delivered at the ports along the Atlantic seaboard at ten cents the bushel cheaper than it can now be sent from Iowa and other North-West States; that the people throughout these States—and they are the grain-growing States—know that, with a good highway to the Atlantic seaboard, the value of their grain would be enhanced ten, twenty, even thirty cents the bushel; and they think

\* Dr. Tremlett.

that Canada and the St. Lawrence can give them such a way.

The greatest difficulty in teaching these people that their best way to the sea lies through Virginia, not through Canada, is to get our people to raise funds for the gratuitous circulation of the Reports\* in sufficient numbers between this and the next meeting of Congress in December. If we can do that, the North-West States will raise their voices in favour of the Virginia route, and demand the money to open it. When that is done, they will not want Canada, and we shall have peace. Thus you see, my friend, I am aiming high and striking far. But with a few heads such as yours to help, we would hit the mark as sure as a gun!

Help me with your fervent prayers. God bless you!

Yours, M.

P.S. In reading over this, it smacks of the "ego," that I, a professor without a Chair, and upon a salary not so good as three hundred of your yellow boys, should be talking about bringing influences into play to prevent war between two great nations! But "tall oaks from little acorns grow."

I wish you would make me that visit you promised me now that I have a nest of my own. The house is never too full but what we can always find a place for you. If the worst comes to the worst, we can rig up a pole out of the window (Tennessee fashion) on which you can roost.

Early in 1870, Maury was busy with a map which should serve as a "caste of the atmosphere"—a device which his friend Brooke, the inventor of the deep-sea lead, had also conceived the idea of. It is described in the following letter to Rutson Maury:—

TO RUTSON MAURY.

Jan. 1870.

. . . . You remember, before the war, how hard I tried to get up a Telegraphic Meteorological Bureau—writing and lecturing about it—now as meteorology for the farmers,

\* Maury's preliminary Report on the Resources of Virginia.



now as storm-signals combined with crop statistics. When I was in England, during the war, I proposed to FitzRoy, and after his death to his successor, Toynbee, a plan for making, by means of an elastic cloth stretched over his map, a caste of the atmosphere, so that he might take in his whole field of observation at a single glance, and so predict with more certainty. Suppose, for instance, with his map pasted on a table, he had bored a hole through London, Liverpool, Portsmouth, &c., and stuck up in each place a little rod graduated for the barometer; that his elastic cloth was then fitted to a slide so that he could set it at the height of the barometer at each of the stations. Fancy each rod to be surmounted by a wind-vane which could be drawn out or shoved in, to show the force of the wind at each place. Thus you would have a "caste of the atmosphere," and see all about it.

Brooke ("deep-sea lead") has suggested just such a plan to Meyers; and Meyers, I have heard, has adopted it. The idea, I think, was as original with Brooke as it was with me.

The following two letters, while recalling his advancing years, prove also that Maury's activity and enthusiasm were unimpaired by them:—

Virginia Military Institute,  
Jan. 15th, 1872.

DEAR RUTSON,

Yesterday was my birthday—sixty-six. Read my mercies in the first of the morning psalms, 71st for the 14th day, and imagine the unction with which I joined in the reading in church. . . .

July 14th, 1872.

DEAR RUTSON,

. . . . I am to go to Boston on the 18th September, to deliver an address by invitation, and in October to do the same at Griffin Ga., St. Louis, and Norfolk. The Board of Visitors won't accept my resignation; speak in dulcet tones about my presence here. . . . I put it to the vote this morning at breakfast, "V. M. I.\* or Richmond?" Unanimous for V. M. I. So here we rest for the present, at least.

The British Association wants me at Brighton. C.

\* Virginia Military Institute.

Burrows (the Mayor) "requests the honour of my presence," August 14th, and they have kindly made arrangements with the Cunarders to take me there and back. . . . It would be fine to set the British Association at work upon my meteorological and crop convention; but I'm too poor—I must decline. The foot took me bad the day before yesterday. Yesterday it had me on crutches, and in the agonies there came a fainting-fit, about 5 P.M. But this morning I feel better, though still on crutches.

During the last four years of his life, Maury occupied himself, as one of his professional duties at Lexington, in making a meteorological survey of his beloved Virginia, partly with the view of developing her resources, and partly in the hope of attracting immigrants to her deserted farms. This survey, as far as it had gone, he embodied in two elaborate and valuable reports; but he was not destined to see the work fully accomplished.

No man was more alive than he was to the fact that the agriculture of the South was to her an unfailing source of renewed prosperity—that, like Antæus, it was from the earth that she would gain restitution of her strength.

Hence he earnestly favoured and persistently urged all measures looking to the improvement of agriculture. To this end he resumed the series of lectures on the subject so dear to his heart, which had been interrupted by the war, and visited, by invitation, cities in Alabama, Virginia, Tennessee, Massachusetts, and Missouri.

In May and October 1871, he delivered the following address at St. Louis, Griffin in Georgia, Norfolk, and Richmond, Nashville, which met with enthusiastic commendation:—

"I calculate, that in consequence of erroneous estimates and the lack of such accurate crop statistics as we now seek, the cotton-planters alone have received, for their last six

crops, many millions of dollars less than they would have received had they known, before selling, the actual cash value of the crops as accurately as it was known after they were sold. . . .

"The crops may be regarded, in one sense, as a meteorological expression of the weather, from seed time to harvest; for that there is a physical relation between the weather and the crops is obvious to all. . . .

"I wrote and lectured on this subject before the war, and I promised then, that if you would give me a lock of cotton from every bale, I would undertake, with that as a fund, to defray all the necessary expenses for forecasting the weather and crops for you, and to render to agriculture and the land services far more signal and valuable than those which commerce and navigation were then reaping from the Wind and Current Charts, and my researches touching the physics of the sea. Nay, I went further, and promised to give back your ounce of cotton, if you would lend me influence with your representatives in Congress in favour of an Act just to permit me to do for the land what I was already doing for the sea. I simply sought leave to extend my observations over the country so as to comprehend its industries, and bring continents as well as oceans within my field of research.

"I would, I have always thought, have carried the day then, and won this great boon for science and for you, but for official obstruction, which arrested its progress until the war broke upon us. . . .

"The machinery for putting this plan into operation is, so far as this country is concerned, all ready—all it wants is the gearing up. You have your Signal Office where weather reports are continually received by telegraph, and whence telegraphic forecasts are issued daily.

"And though this work is so new to the officers engaged

in it, their progress so far is in the right direction. You have also the Agricultural Bureau, in the service of which reports embodying many of the facts and observations required are already made, or might be without any additional expense. Many of the data which these two offices seek to obtain stand somewhat in the relation of cause and effect to each other—as, for instance, a dry season and bad crops. Your fields have the same area and soil this year that they had last. Why is not their yield the same? Simply because the seasons were different. Do you mean to say that amid all the mind, means, and appliances of the age, the relations between the weather and the crops are past finding out? If I could, with just such a system of researches for the sea, sit down in my office and tell the navigator how he would find the wind, at any season of the year, in any part of the ocean through which he wished to sail, am I promising too much when I tell you, that by the plan I now propose the relation between the weather and the crops is as capable of scientific development as were the relations between sea-voyages and the winds twenty-five years ago?

“The new system of observations may be so arranged that the two offices may co-operate, each giving the other what it lacks to make its own observations and data complete. . . .

“I have drawn my illustrations chiefly from cotton. But the grain-growers have a larger interest at stake in this matter than even the cotton-planters; and so are all who are engaged in the cultivation of staples, of whatever kind, in any part of the world. Proper co-operation having been established between the Signal Office and Agricultural Bureau at Washington, let us see what else is required to carry the plan into effect in this country. . . .

“I believe the Agricultural Bureau has already in its employ agents in the various States to collect agricultural information. Its organization for receiving monthly or

bimonthly reports as to the staple crops of the various sections may, for aught I know, be complete. . . .

"I am under the impression, however, that there is in this Bureau abundant room for improvement as well in organization as in conduct and management; for its utterances as to yield of crops do not, in commercial circles, seem to be received with as much confidence as are the private circulars of many produce-dealers.

"The conference I propose would deal with these defects and give efficiency to both.

"But let us suppose, for the sake of illustration and by way of showing the main features of my plan, that the proper meteorological stations have been occupied. The meteorological office, though more recently established, is the more deserving of commendation. Its forecasts of the weather are instructive; but they are too vague, as yet, to be of much practical value. Here is a fair sample of its predictions, called 'Weather Probabilities.' I take this from the first paper I happened to lay my hands on this morning. 'Washington, August 11th.—A low barometer, with cloudy weather; cold local storms will probably extend during the afternoon over New York and New England.' There is nothing in these probabilities that you can utilise. There is no reason why, with the means and appliances under the control of that office, you should not reasonably expect to have timely warnings, at least of certain great changes in the atmosphere, that you can profit by. . . .

"But the time is coming—and my plan will hasten it—when these 'probabilities' will become certainties, and be more specific and practical. . . . Of what use can it be to any living soul to know that a low barometer with local storms will probably extend during to-morrow afternoon over New York and New England? Now, if it had said what counties and parts of New York and New England

these local storms would reach, and give some idea of their character and severity, whether rain, hail, wind, &c., we should have something to count upon.

"But let us suppose, for the sake of illustration and by way of showing the main features of the plan, that the proper meteorological stations have been occupied, and that the observers and co-operators report upon the crops as well as upon the weather; and that, at first and in a tentative way, a special crop-reporter be assigned to every district of 10,000 square miles in the States, who should travel over his beat continually and keep the central office posted, by monthly reports at first, as to the state and promise of the staple crops of his district; at the same time the meteorological observers in this district would send in their observations in detail for the same period, also by mail, while by telegraph both observers keep up their daily reports, both as to the weather and crops. This would give five crop-reporters for Alabama, five for Tennessee, four for Kentucky, and so on all over the country. In Europe, twelve for Great Britain, nineteen for France, one for Holland, &c. . . .

"How to go to work about this, and how to interest all people in a common plan, requires consultation, goodwill, and co-operation among all nations. This we must seek through their wise men and meteorologists, and to get them in conference for that purpose, with their governments at their back, is wherein your kindly aid and friendly offices, with the administration are solicited.

"Europe is ripe for this scheme. There has just been held there a 'Grand International Congress for the Advancement of Cosmographic, Geographic, and Commercial Knowledge.' A correspondent writes, 'Your resolutions for an Agricultural and Meteorological Conference International were received with cheers, and by unanimous vote ordered to be printed.'"

This paper was read before the International Congress at St. Petersburg, &c., by M. Quetelet (see *Le Moniteur Belgique*).

In pursuance of these suggestions, the following resolutions were unanimously adopted :—

“Resolved, first—That the President of this society be and hereby is instructed to petition, in behalf of the farmers of Tennessee, the United States Government—through the State Department and the Executive—in favour of the establishment, by international co-operation, of a general and systematic plan of meteorological observations and crop reports, and to request the Government, in furtherance of this object, to invite all other nations to meet, in the persons of their leading meteorologists, at an early day, in a conference similar to that held in Brussels in 1853: first, for the purpose of connecting with the plan now proposed the system that was then adopted for the sea; second, for the purpose of arranging details; and third, for the purpose of providing for a general system of telegraphic meteorology and crop reports, to the end that our knowledge of the laws which control the functions of the atmosphere may be increased, and that accurate and useful forecasts may be made at frequent intervals as to weather and crops in all countries.

“And the President of this society is desired also to request that the United States Government will co-operate in this system of research by causing the plan that may be agreed upon in conference to be carried out in this country, and to be adopted on board of the public cruisers.

“Resolved, second—That the President of this society transmit a copy of these resolutions to the State Government and to each of the agricultural societies and journals in the State, inviting their co-operation and requesting them to support the measure with their influence and with similar petitions.”

Hon. Jacob Thompson submitted the following resolution :—

“Resolved—That this Chamber of Commerce, approving the general system of international meteorological observations and crop reports as set forth by Commander Maury, do appoint a committee of three, consisting of the President and first and second Vice-Presidents, to petition the President of the United States to take early measures to call the attention of other nations to this subject, and thereby bring about a meeting of the leading meteorologists of different nations, so as to devise a uniform system of observation and crop reports, and ensure their publication for the benefit of commerce and agriculture throughout the whole world.”

The resolution was unanimously adopted.

In his enthusiastic pursuit of this favourite scheme of crop and weather forecasts for the farmers, and by an extended and exhausting lecturing tour once more to urge this subject upon the farmers, in the autumn of 1872, Maury overtaxed his strength and brought on a return of an old disorder (gout in the stomach), from which he never rallied.

At the National Agricultural Congress held in St. Louis in October, 1872, he again strongly urged the importance of an “International Conference” between the leading agriculturists and meteorologists of all countries. Looking to the definite organization of a system of crop and weather forecasts, he pointed out the approval which it had received from the most eminent men of science in the world, and the benefits which would immediately accrue from it, and, while regretting the indifference of the Federal authorities, he urged the farmers to use their influence in its favour, in their several States. “Private interest,” said he, “in this matter, I have none; the success of the scheme will benefit all of you more than its projector. I am under the ban of the Nation and can hold no office in it, either State or Federal. The moment the Government takes hold of it, my association with it ceases. I cannot share in the honour of helping to organize or of



assisting to carry it out. I have no farm, neither do I cultivate a parcel of ground. Therefore I say, although I advocate this measure so earnestly, and have done so for many years, there is no one in the land who is less to be benefited by its success than I."

His health gave way under the fatigue and exposure of this last trip, before he had fulfilled all his engagements, and about the middle of October he hurried home. He exclaimed to his wife as he crossed the threshold, "My dear, I am come home to die." Loving hands with heavy hearts helped him to the bed from which he was never again to rise. For four long months he lay, at times suffering mortal pain, but in the intervals dictating and revising the last edition of his 'Physical Geography.' A short time before the anniversary of his birth, January 14th, he prayed aloud in the darkness of the night that God would forgive him the few years he lacked of man's allotted span, and take him home. He sent for his son-in-law, S. Wellford Corbin, of Farleyvale, and begged that he would stay by him and nurse him till the end. This he faithfully did, and in his arms the last breath was drawn.

One of his daughters thus wrote:—

He loved to have us all assembled round his bed, and if we were not all within the range of his vision he would call out the names of those he missed. Gazing earnestly in the face of each, he would say something appropriate and affectionate, always ending with "You see how God has answered my prayers, for I know you every one;" adding, "I shall retain my senses to the last. God has granted me that as a token of my acceptance. I have set my house in order, my prayers have all been answered, my children are gathered round my bed—and now Lord, what wait I for?" He repeated the following prayer of eleven petitions, which he wished each of his children and grandchildren to use every day:

"Lord Jesus, thou Son of God and Redeemer of the world, have mercy upon me! Pardon my offences, and teach me the error of my ways; give me a new heart and a right mind. Teach me and all mine to do Thy will, and in all things to keep Thy law. Teach me also to ask those things necessary for eternal life. Lord, pardon me for all my sins, for Thine is the kingdom and the power and the glory, for ever and ever, Amen."

He had composed this prayer for himself thirty-four years before, when his leg was broken, and had repeated it every night since. At another time he prayed, "O Lord, touch my lips with hallowed fire, like Isaiah's of old, that I may testify to Thy love and mercy to me, who am but as a little child in all but wickedness."

After we had sung the last hymn he ever heard on earth—"Christ is risen"—the evening before his death, he extended both hands, and said slowly and distinctly, "The peace of God which passeth all understanding be with you all—all!" As the supreme hour drew near, he said to his eldest son, Colonel Richard L. Maury, who had been his constant and devoted nurse, "Are my feet growing cold? Do I drag my anchors?" On being answered in the affirmative, he faintly exclaimed, "All's well." About fifteen minutes before death he said he wished his wife and daughters to leave the room that they might not be needlessly distressed by witnessing his last struggle. Notwithstanding this, I lingered where I could see and hear without being seen, and observed him in the last moments lift his hands toward Heaven like a little child who wants to be taken up. He breathed his last at 12.40 P.M., on Saturday, February 1st, 1873.

The simplicity and fervour of his Christian faith, the completeness and child-like humility of his trust in God, and his entire resignation to the Divine will, were alike remarkable. All of these, owing to the length of his last illness, were allowed unusual scope for development, and the remembrance of them constitutes a precious heritage to his family. His

tenderness as husband and father were at the same time beautifully illustrated, and this, as well as the other qualities mentioned, were at times lightened by flashes of that quaint humour which had always been one of his characteristics. He derived great comfort from a visit of a week made him in December by his brother-in-law and life-long friend, Dr. Brodie S. Herndon, of Savannah, in Georgia, though his professional judgment as to the nature of the malady, which was ulceration of the stomach, was no more encouraging than that previously given by his regular attendant, Dr. R. L. Madison, of the Virginia Military Institute.

The chief pleasure of his long confinement seemed the society of his family, on whom, individually and collectively, he loved to invoke the choicest blessings of Heaven. His youngest grandchild, an infant of a few weeks, was in the house, and he told her father that when he saw him fading fast he must bring the little one to receive his blessing. "It may be that the prayer of a repentant sinner will be answered," he added. It is needless to say that this request was complied with. He said he almost felt as if this child had come to take his place—she just entering life, he just leaving it.

To two friends at a distance—Commodore Jansen and the Rev. F. W. Tremlett—he sent loving farewell messages. He directed one of his daughters to write to the former at the Hague, and tell him how ill he was; how he longed to see him, and what a solace his love was, and had always been, to him. The latter was the friend by whom, some years before, he had been admitted to the full communion of the Church. "When I am dead," he said, "write to Tremlett and tell him that I think with gratitude of him as a means of bringing me to the communion of Christ, and that I love him. Tell him that when I die and go there" (raising his eyes upward), "I will, if a repentant sinner may, intercede for a mansion for him."

The following notice of his death appeared in *Temple Bar* of March, 1873 :—

“ . . . Of Maury's private character it is scarcely possible to speak in terms of too high eulogy. His unimpeachable integrity and strict sense of honour shed a halo of content over his whole life. He tried, through life, never to do anything of which his conscience disapproved, and he studied, even in minutest matters, exactitude and moderation. His general knowledge was very extensive, and in his own special science he excelled all other men. Yet his modesty was so great, and his simplicity so charming, that a child would feel at home in his company.

“ His religious feeling was deep and personal. He never obtruded his views upon others, though he died, as he lived, in open profession and full communion of the Protestant Episcopal Church.

“ On his death-bed, he bequeathed a prayer to his children which, like the famous one of Dr. Johnson, the great lexicographer, is touching and sublime in its simplicity.

“ For the Bible he entertained the highest veneration, and its testimony, to his mind, was ever strengthened by the progress of scientific discovery.

“ The Book of Job and the Psalms of David were his favourite parts of the Old Testament, especially the 107th Psalm. Very early in life he felt ‘ That they who go down to the sea in ships, and do business in great waters, see the works of the Lord, and His wonders in the deep.’

“ This great pioneer of meteorological science passed away, in the calm dignity and faith of the Christian philosopher, at the ripe age of sixty-seven. ‘ His eye was not dimmed, nor his natural force abated.’ ”

In respect to the place of his interment, he expressed no definite wish, saying that his parents, brothers, and sisters

all lay widely separated, and his dead boy (John) he knew not where.

To the request of his wife that she might be allowed to bury him in Richmond, where she herself expected to lie, he replied gently, "Very well, my dear; then let my body remain here until the spring, and when you take me through the Goshen Pass\* you must pluck the rhododendrons and the mountain-ivy and lay them upon me."

His body lay in state in the library of the Institute, the breast covered with the various decorations he had received from Foreign Powers. Thence, on the following Wednesday (February 5th), after the burial service, read by the Rev. William N. Pendleton, D.D., it was borne to its temporary resting-place in the Gilham vault in the cemetery, immediately opposite the tomb of "Stonewall Jackson."

#### THROUGH THE PASS.

##### I.

"Home, bear me home, at last," he said,  
"And lay me where your dead are lying;  
But not while skies are overspread,  
And mournful wintry winds are sighing!

##### II.

"Wait till the royal march of Spring  
Carpets the mountain fastness over—  
Till chattering birds are on the wing,  
And buzzing bees are in the clover.

---

\* This is a far-famed lovely Pass, where the North Anna breaks through the mountains. Close along the bank of the river and under overhanging cliffs and boulders of granite, among which grow and climb great clusters of the above-named flowers in the wildest and most beautiful profusion, the stage-road winds its perilous way to the nearest station on the Chesapeake and Ohio Railroad.

## III.

"Wait till the laurel bursts its buds,  
And creeping ivy flings its graces  
About the lichened rocks—and floods  
Of sunshine fill the shady places.

## IV.

"Then, when the sky, the air, the grass,  
Sweet Nature all, is glad and tender—  
Then bear me through the Goshen Pass,\*  
Amid the hush of May-day splendour."

## V.

So will we bear him—human heart  
To Nature's own drew never nearer;  
And never stooped she to impart  
Her love to one who held it dearer.

## VI.

The stars had secrets for him; seas  
Revealed the depths their waves were screening;  
The winds gave up their mysteries;  
The tidal flows confessed their meaning.

## VII.

Of ocean paths the tangled clue  
He taught the nations to unravel,  
And showed the track where safely through  
The lightning-footed thought might travel.

## VIII.

And yet unspoiled by all the store  
Of Nature's grander revelations,  
Who bowed more lovingly before  
The lowliest of her fair creations!

## IX.

No sage of all the ages past,  
Ambered in Plutarch's limpid story,  
Upon his living age has cast  
A radiance touched with truer glory.

---

\* See page 319.

X.

His noble living, for the ends  
God set him—duty underlying  
Each thought, word, action—naught transcends  
In lustre, save his nobler dying.

XI.

Do homage sky, and air, and grass—  
All things he cherished sweet and tender—  
As through our gorgeous mountain-pass  
We bear him in his sunset splendour!

*Lexington, Va.*

MARGARET J. PRESTON.

## APPENDICES.

---

### APPENDIX A.

#### CORRESPONDENCE RELATING TO THE HONOURS CONFERRED UPON M. F. MAURY.

THE Emperor of Russia made Maury "Knight of the Order of St. Ann"; the King of Denmark made him "Knight of the Dannebrog"; the King of Portugal, "Knight of the Tower and Sword"; the King of Belgium, "Knight of the Order of St. Leopold"; the Emperor of France, "Commander of the Legion of Honour"; while Prussia, Austria, Sweden, Holland, Sardinia, Bremen, and France struck gold medals in his honour. The Pope also forwarded a complete set of all the medals which had been struck during his pontificate as a mark of his appreciation of Maury's services in the cause of science. To all these was afterwards added the decoration of "Our Lady of Guadeloupe," presented by the unfortunate Emperor of Mexico. His services were also recognised by numerous learned Societies, both at home and abroad.

He became Corresponding Member of the "Natuurkundige Vereeniging in Nederlandsch Indie." Batavia, 17th *Feb.* 1853.

Member of "Die Naturforschende Gesellschaft in Emden." Emden, *March* 22nd, 1854.

Member of the "Société des Sciences, des Arts et des Lettres de Hainault." Mons, *Dec.* 7th, 1854.

Member of the "Académie Impériale des Sciences de Russie." St. Petersburg, *Dec.* 29th, 1855.

Member of the "Académie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique." Brussels, *Dec.* 17th, 1854.

Corresponding Member of the "New York Lyceum of Natural History." New York, *June* 18th, 1865.

Correspondent of the "Philadelphia Academy of Natural Sciences." Philadelphia, *Feb.* 22nd, 1858.



Member of "Die Gesellschaft zur Beförderung der Gesammten Naturwissenschaften in Marburg." Marburg, *Feb.* 13th, 1856.

Member of the "Historical Society of New Jersey." Trenton, *May* 17th, 1856.

Member of the "Historical Society of Tennessee." Nashville, *Sept.* 3rd, 1857.

Member of "Die Gesellschaft für Erdkunde in Berlin." Berlin, *April* 18th, 1858.

Member of the Bohemian Royal "Gesellschaft der Wissenschaften." Prague, *January* 13th, 1858.

Director "del Observatorio Nacional." Mexico, 1865.

"Consejero Honorario de Estado." Mexico, 1865.

"Miembro honorario de la Sociedad Mexicana de Geografía y Estadística." Mexico, 1865.

"Miembro de la Imperial Academia Mexicana de Ciencias." Mexico, 1865.

LL.D. of the University of Cambridge. England, 1867.

He was also a member of many other learned bodies, of which the records have been lost during the war.

All the letters are inserted here that accompanied these honours from the different sovereigns of Europe, except those which were lost or destroyed during the late war. They begin with the letter from Baron Humboldt, presenting the great gold medal of science from the King of Prussia, and also the Cosmos medal.

MY DEAR AND ILLUSTRIOUS FRIEND, Berlin, *Feb.* 3rd, 1855.

It is now a great many years since you have been so kind as to enrich with your generous contributions the most important institutions—the Admiralty, the Academy, the School of Navigation, and Libraries—of my country. Your immense labours on currents and soundings, and the direction of winds at different seasons and latitudes, have exercised the most beneficial influence on the commerce of nations, by shortening in a surprising manner the passages by sea, and augmenting the security of navigation in all seas. The result has been the opening of new paths to navigators who have been penetrated by the correctness of your views, and an increase of the facilities previously derived from the application of steam. My Sovereign, the King of Prussia, sensible of the eminent merit

of your laborious undertaking, and interested by the noble efforts now making by the Government of the U. S. for the advancement of the sciences which are so closely allied with the development of the common prosperity, desires to give to Lieutenant Maury, Superintendent of the National Observatory at Washington, a mark of his gratitude, by presenting him, through the hands of our Minister, M. de Gerolt, with the medal designed as a reward for distinguished works of science. Sensible also of the affection with which you have honoured me for so long a period, the King has deemed that he would be doing you a further pleasure by adding another medal—that which his Majesty had struck for me upon the publication of my ‘Cosmos.’

I pray you to accept, my dear friend, the renewed assurance of my highest and most affectionate consideration.

Your very humble and most devoted servant,

THE BARON AL. VON HUMBOLDT.

Accompanying the medal struck in his honour, came the following letter from the Republic of Bremen:—

SIR,

Washington, D.C., December 28th, 1855.

It affords me great pleasure to hand you, in the name of my Government, the accompanying gold medal; its German inscription may be thus rendered in English: “To the Promoter of Science, to the Guide of Navigators, Lieutenant M. F. Maury, an honorary acknowledgment of the Senate of the Republic of Bremen.” This inscription, better than could any of mine, shows the sense of high appreciation in which your eminent merits, in regard to all maritime interests, are held in my country—the citizens of which are perhaps more generally engaged in navigation, and therefore more benefited by your valuable discoveries and directions than those of any other country. Your name, which has so long been an ornament of the U. S. Navy, is, and will ever be, gratefully remembered in Bremen. I beg leave to avail myself of this agreeable occasion to offer you at the same time a renewed assurance of the great personal respect and regard with which I have the honour to be

Your obedient servant,

R. SCHLIEDON,

*Minister-Resident of the Republic of Bremen.*

SIR,

Legation of Denmark, Nov. 11th, 1856.

I have great pleasure in informing you, by order of my Government, that His Majesty the King of Denmark, being desirous of testifying his high sense of the eminent services you have rendered to science by your important and comprehensive researches with reference to the physical geography of the sea, its winds and currents, recorded in the valuable publications of the National Observatory under your superintendence, His Majesty has been pleased to confer on you the Cross of a Knight of the Dannebrog. I shall have the honour to transmit to you the insignia of the Order as soon as received by the Legation here. I shall have the honour to be, with high consideration, sir,

Your most obedient servant,

TORBIN BILLE.

SIR,

U. S. National Observatory, Nov. 14th, 1856.

Your letter of the 11th inst. has been received and read with a high degree of satisfaction. In it you have the kindness to inform me that His Majesty the King of Denmark, to testify his high appreciation of the services rendered by myself in the cause of science, has signified his wish to confer upon me the Cross of the Order of the Dannebrog. I consider myself fortunate, so to have wrought in my humble office that my labours in the service of my own country should have commended themselves to the favourable consideration of His Majesty; and I feel myself highly honoured that he should deem them worthy of such a signal mark of royal favour.

The organic laws of my country, however, will not allow one of its officers to accept a title from any foreign potentate. Permit me, therefore, to plead this in excuse of the request that you will proceed no further in carrying out the honourable and friendly intentions expressed in your letter.

I have the honour to be your obedient servant,

M. F. MAURY.

To MR. TORBIN BILLE.

COUNT,

Ministry of Foreign Affairs, Paris, Nov. 6th, 1858.

The Government of the Emperor has been struck with the great services every day rendered to navigators of all countries by the remarkable works of which Lieut. Maury, of

the navy, is the author. I have accordingly agreed with the Minister of the Marine to solicit from His Majesty, as an evidence of the high esteem placed upon these works, the nomination of Mr. Maury to the Order of the Legion of Honour. I should not be willing at any time to carry out this intention before having informed Mr. Mason, and obtained the assurance that the Government of the U. S. would see no objection thereto. The Minister of the United States replied that the Constitution of the Union prohibits every American citizen occupying any position in the employ of the Government from accepting any emolument, present, charge, or other titles conferred by any foreign government, and that it is only from Congress that authority can emanate for Mr. Maury to accept the distinction proposed. He added, moreover, that he would write to Washington upon the subject.

Receive, Count, the assurance of my high consideration.

WALEWSKI.

The following letter accompanied a valuable present of books and charts from Admiral Hammelin, Minister of Marine at Paris, Imperial Marine Director-General of the Department of Charts and Plants:—

DEAR SIR,

Paris, Feb. 24th, 1860.

I hasten to transmit to you by the present courier a letter of Admiral Mathieu's relative to the present which we are preparing for you of our hydrographical collections. I make to you also on this occasion my very sincere compliments. You should be convinced, dear sir, that we shall always be disposed to be useful or agreeable to you. I only regret that we are not able to send you something of importance on the subject of winds and currents; but we are scarcely yet organized. I hope, however, that we shall yet in time bring one stone at least to that edifice which you have so carefully reared, and that we should follow in the fruitful path which you have opened for us.

Receive, dear sir, the assurance of my entire devotedness, and of my respects.

A. DE LA MARCHE.

To M. MAURY, Director of the Observatory,  
Washington.

Paris, Feb. 24th 1860.

SIR, AND HIGHLY HONOURED COLLEAGUE,

Independently of the great gold medal which the Government of the Emperor has decreed you, as a mark of esteem for the eminent services which you have rendered to navigation, Admiral Hammelin, Minister of Marine, had determined to give you an especial mark of his gratitude for the communications so important and so numerous which you have addressed to the department. Admiral Hammelin has instructed me to send two complete collections, bound, of our Charts and Nautical Instructions, the one intended for the Observatory, and the other for yourself personally.

The copy which is destined for you bears on the inside of the binding the following words: "His Excellency, Admiral Hammelin, Minister of Marine, to Lieutenant Maury"; and they have just been sent through the Legation of the United States at Paris.

I pray you accept my sincere congratulations, and to be assured of the devoted affectionate sentiments and of the high consideration with which you will ever be regarded by your

Very obedient servant,

A. MATHIEU,

*Rear-Admiral and Director-General.*

To Lt. MAURY, Director of the Observatory,  
Washington.

P.S. Our Meteorological Service, under the active and experienced Director of Engineers, De la Marche, is now organized. As soon as we shall have collected sufficient data, we will communicate them to you.

SIR,

Milan, December 10th, 1857.

I avail myself, with real pleasure, of the opportunity given me by your kind offer of the Sailing Directions, to express to you my warm and sincere thanks for it; to tell you how since years I observed, with intense interest and admiration, your noble and unequalled efforts, in order to forward the improvement of the scientific part of our profession.

I trust you will accept this little present as a token of my gratitude towards a man whom all seafaring nations are bound to look upon with respect and thankfulness.

Believe me, sir,

Yours truly,

FERDINAND MAXIMILIAN.

## APPENDIX B.

## MYSTERIOUS FATE OF A YOUNG CONFEDERATE OFFICER.

In the winter of 1863, while Grant's army was lying before Vicksburg, a young gentleman of Virginia, serving in the Confederate Army of Vicksburg, disappeared under circumstances of extraordinary mystery, and to this day his fate remains as inexplicable as it was on that when he was first missed by his comrades.

On the 27th day of January, 1863, the Confederate army occupying Vicksburg and its vicinity numbered near thirty thousand effectives. Major-General Carter L. Stevenson was in chief command, and Major-General Dabney H. Maury was next in rank, and commanded the right wing, holding the lines from Hayne's Bluff on the Yazoo River to the city of Vicksburg.

On the morning of January 27th, General Maury, accompanied by Colonel William E. Burnett, his Chief of Artillery, and by his young aide-de-camp, John Herndon Maury, son of Commander Matthew F. Maury, rode to General Stevenson's head-quarters in Vicksburg, and, after concluding his business there, sent those two gentlemen of his staff to make a reconnaissance of certain positions near the Big Black Road. This was about 10 A.M. He has never seen his young aide-de-camp and kinsman John Maury since that moment; nor has he ever been able to ascertain with certainty what has been the fate of the young man.

Burnett returned to dinner at head-quarters, and reported that about one o'clock P.M., having finished their business about the Big Black Road, young Maury left him in order to ride down to a point opposite the mouth of the canal, and observe what the enemy was about there. No uneasiness was felt on account of his non-return that night. But when ten o'clock had passed next morning, and "Johnny," as all called him, had not yet been seen or heard of, a vague anxiety began to make itself felt. This was soon increased by hearing that on the previous evening, at about three o'clock, Generals Stevenson, Barton, and other officers from Fredericksburg, Virginia, of which town John H. Maury was

a native, had seen a riderless horse resembling his grey mare on the far side of a crevasse in the levee of the plantation of Mr. Smedes, about four miles below Vicksburg. On hearing this, General Maury, accompanied by several officers and couriers, rode to the point indicated by General Stevenson, and there found his young kinsman's horse with saddle on and bridle hanging loose. A strong levee had been built by Mr. Smedes from the Highlands, more than a mile distant, down to the Mississippi River, in order to shut out the waters of a bayou, which at some seasons would otherwise inundate his plantation. Recently this bayou had torn its way through this levee, making a breach of about twenty yards width, through which the water was now running deep. The trail of the mare led from the Highlands along the levee, entered the bayou at the crevasse, and passed out on the other side. From the point of exit the mare had been running back and forth so much that the party were unable to follow the trail further, but concluded that Maury had been drowned in the attempt to cross the water, and immediately procured boats and commenced an active search for his body. This was continued without ever discovering any trace of the missing man until the next evening, when Colonel Burnett, an experienced Texas hunter, reported that he had been carefully examining the trail of the mare, and that he observed she was evidently mounted when she emerged from the bayou beyond the crevasse; that she had then been ridden at a trot along the levée to a point not far from the river; that at this point her footprints on the levee ceased, she having turned off from it into the overflow, made a detour, and come up upon it again nearer to the crevasse; that from that point where she had thus come upon the levee she had galloped (riderless) back to the brink of the crevasse, near which she remained until she was found there; that, at the point where the mare had turned off, he found the paper cases of several cartridges, different from any used in our army; also a piece of india-rubber or gutta-percha, such as Confederates could not procure, which had been used to cover the cone of a rifle. There were also at this point evidences of a scuffle, and on the brink of the Mississippi River, a few hundred yards distant, he found the edge of the bank freshly broken off, and signs that several men had there embarked in a small boat.

Although the space in which the body must lie—had the

young man been drowned, as at first supposed—was small and easily examined, no one of the searching party had discovered any trace of it. Therefore, on hearing Burnett's report, the conclusion was adopted that Maury had been captured by some scouting party from the army across the river, and had been borne, a prisoner, to the other shore.

Next morning Major Flowerer, Adjutant-General of Maury's division, was sent under a flag of truce to General Grant to make inquiry about Lieutenant Maury. To our grief and surprise, he returned in the evening with the report that nothing was known of him by the Federal Commander; but with the courteous assurance from General Grant and Admiral Porter, who knew young Maury well, that they would take all possible means to ascertain whether he had been made a prisoner by any of their party, and would communicate to General Maury the earliest intelligence they could procure.

General Grant had been personally acquainted with General Maury at West Point and in Mexico, where they had served together; and the unfortunate young officer whose fate was under investigation was known to Admiral Porter and to other officers of the United States Navy, who had met him while he was a boy at the Observatory of which his father was so long the Chief. The conviction was then positive, as it is now, that those officers were sincere in their desire and active in their efforts to find the poor boy.

Soon after the fall of Vicksburg (July, 1864), General Maury, then in Mobile, received an ill-written letter (from an unknown and evidently uneducated writer) informing him that his young cousin had been made prisoner, and had died of pneumonia, on the third day after his capture, on board a Federal gunboat lying off Vicksburg. At the time very little importance was attached to this letter. But not long after, Colonel Underhill, a gallant young Scotchman who had resigned his commission in the British army to serve in that of the Confederacy, wrote to General Maury a very clear and consistent narrative, which he had received from a Captain Smith of the 13th Iowa Regiment, United States Army.

Captain Smith and Colonel Underhill were natives of the same county in Scotland, and met during a truce before the lines of Vicksburg, Underhill then being aide-de-camp to General Stephen D. Lee. During a sociable conversation on one



occasion, Smith told Underhill that on the 27th of January he had crossed from the mouth of the canal with a party of four or five men to the levee on Smedes' plantation, in order to ascertain if we were constructing any batteries there. That soon after reaching the levee he observed a Confederate officer riding down it towards the point where he and his scouting party were. Lying close, they waited until the officer had come up to them and dismounted. While he was looking through his field-glasses at the Federal works on the opposite bank, Smith and his men sprang upon him and secured him. The mare broke away, ran out into the "overflow," and, surmounting the levee, galloped back to the point whence she had come. As soon as it became dark, Smith recrossed the Mississippi with his prisoner, and sent him to Grant's head-quarters, where he believed he was when General Maury's flag of truce came to inquire for him two days after. Captain Smith showed Underhill the opera-glass which he had taken from his prisoner, and retained as a trophy of his exploit. The glass was that which General Maury had on that morning lent to his cousin (with his name and rank upon it).

There are several points in this narrative which give it every appearance of truth. It agreed, in the main, with Burnett's observations, and the theory deduced from them, of which neither Underhill nor Smith had ever heard. The opera-glass seemed to fix the fact of capture, while the respectable standing of the two gentlemen, and the absence of any motive or object for such a fiction, leave us no right to question any part of their story.

As to Smith's belief that young Maury was at Grant's head-quarters while that General was denying all knowledge of him, we must remember that Smith could only know that Maury had been sent up to head-quarters, while Grant, having just arrived at the army with large reinforcements, and being occupied in organizing his forces, could not be expected to be interested in, or even informed, of the capture of a lieutenant. Therefore we are justified in believing young Maury was captured and borne across to the Federal Army. What was his subsequent fate is the mystery which has never yet been revealed.

For more than fifty years the father, the uncles, and many others of the kindred of this young gentleman have been well-known officers of the naval and military service of the United

States. Having passed almost his whole life at the National Observatory at Washington, he was himself well-known to scores of navy officers. These circumstances, considered together with his position as Staff-Officer of the General second in command of the army then at Vicksburg; the immediate, active, and persistent search made for him; the cordial interest evinced by General Grant, Admiral Porter, Captain Breeze, and other officers of the Federal Service, in the investigation thus made about his fate, combine to make the mystery which enshrouds it as extraordinary as it has been inexplicable; while the beautiful traits, the fine intellect, the excellent attainments, and the gallant yet gentle and polite bearing of the young man, invest it, to all who knew him, with a peculiar and most painful sadness.

"His parents are now in the decline of life. Exiles from their homes, they are borne down by this mysterious sorrow. If there be any one living who knows facts relative to the time and manner of young John Maury's death, we beg such an one to make them known. Let not this cruel silence be longer kept."

This appeal was made by General Maury through the columns of the *Richmond Whig*, in 1867. It was immediately copied into many Southern papers, among others by the *Mobile Advertiser and Register*, which says:—

"We published a week ago an article from the *Richmond Whig* upon the subject of the mysterious disappearance, at Vicksburg, in January, 1863, of Lieutenant John Herndon Maury, of the Confederate Army, a son of Commodore M. F. Maury, at that time serving upon the staff of his relative, Major-General Dabney H. Maury.

"On the day when that article appeared—that is, on Sunday last—a stranger called at the office of this paper and stated that he had some information upon the subject of the mysterious disappearance of the young officer.

"This gentleman gave his name as W. H. Harris, of Louisiana, formerly in the Confederate service as a scout, under the orders of General Stephen D. Lee.

"None of the editorial corps of the *Advertiser and Register* were in when Mr. Harris called. A memorandum of the information given by him was hastily taken by one of the clerks of the office. It is very imperfect and unsatisfactory,

and we have refrained from publishing it in the hope of learning something more upon the subject, but have not been able to do so.

"Mr. Harris states, according to this memorandum, that Lieutenant Maury was captured by a party of the enemy and taken across the Mississippi River, and that he was then shot, or, in other words, murdered, by order of one Griffin, a deserter from the Confederate Service.

"He says that six balls were shot through his body, and that he was buried on the spot, about eight miles below Vicksburg, on the opposite bank of the river."

Many attempts have been made by Maury's family to communicate with this Mr. Harris; but he has never been heard from since.

If any one who reads this book can throw any light upon the awful fate of this young officer, in God's name let them communicate without further delay with his sister, Mrs. S. W. Corbin, of Farleyvale, near Fredericksburg, Virginia!

---

## APPENDIX C.

"A VINDICATION OF THE SOUTH AND OF VIRGINIA,"  
BY M. F. MAURY.

ONE hundred years ago, we were thirteen British Colonies remonstrating and disputing with the Mother Country in discontent. After some years spent in fruitless complaints against the policy of the British Government towards us, the Colonies resolved to sever their connection with Great Britain, that they might be first independent; and then proceed to govern themselves in their own way. At the same time they took counsel together, and made common cause. They declared certain truths to be self-evident, and proclaimed the right of every people to alter or amend their forms of government as to them may seem fit. They pronounced this right to be an inalienable right; and declared that when a long train of abuses and

usurpations evinces a design on the part of the Government to reduce a people under absolute despotism, it is their right, it is their duty, to throw off such Government. In support of these declarations, the people of that day, in the persons of their representatives, pledging themselves, their fortunes, and their sacred honour, went to war, and in the support of their cause appealed to Divine Providence for protection. Under these doctrines, we and our fathers grew up; we were taught to regard them with a reverence almost holy, and to believe in them with quite a religious belief.

In the war that ensued, the Colonies triumphed; and in the treaty of peace, Great Britain acknowledged each one of her revolted Colonies to be a nation, endowed with all the attributes of sovereignty, independent of her, of each other, and of all temporal powers whatsoever. These new-born nations were New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, and Georgia—thirteen in all.

At that time, all the country west of the Alleghany Mountains was a wilderness. All that part of it which lies north of the Ohio River, and east of the Mississippi, called the North-West Territory, and out of which the States of Ohio, Indiana, Illinois, Michigan, Wisconsin, and a part of Minnesota, have since been carved, belonged to Virginia. She exercised dominion over it, and in her resided the rights of undisputed sovereignty. These thirteen powers—which were then as independent of each other as France is of Spain, or Brazil is of Peru, or as any one nation can be of another—concluded to unite, and form a compact called the Constitution, the main objects of which were to establish justice, secure domestic tranquillity, provide for the common defence, and promote the general welfare. To this end they established a vicarious Government, and named it the United States. The compact had for its corner-stone the aforementioned inalienable rights. With the assertion of these precious rights—which are so dear to the hearts of all true Virginians—fresh upon their lips, each one of these thirteen States signatories to this compact, delegated to this new Government so much of her own foreign powers as were deemed necessary for the accomplishment of its objects, reserving to herself all the powers, prerogatives, and attri-

butes not specifically granted or specially enumerated. Nevertheless Virginia, through abundant caution when she fixed her seal to this Constitution, did so with the express declaration, in behalf of her people, that the powers granted under it might be resumed by them whenever the same should be perverted to their injury or oppression; that "no right of any denomination given by that instrument could be cancelled, abridged, or modified by the Congress, by the Senate and House of Representatives, acting in any capacity, by the President or any department or officer of the United States, except in those instances in which power is given for those purposes." \* With this agreement, with a solemn appeal to the "Searcher of all hearts" for the purity of their intentions, our delegates, in the name and in behalf of the people of Virginia, proceeded to accept and to ratify the Constitution for the Government of the United States.

Thus the Government at Washington was created. But it did not go into operation until the other States—parties to the contract—had accepted by their act of signature and tacit agreement the conditions which Virginia required to be understood as the terms on which she accepted the Constitution, and agreed to become one of the United States. Thus these conditions became, to all intents and purposes, a part of that instrument itself; for it is a rule of law and a principle of right laid down, well understood, and universally acknowledged, that if in any compact between several parties any one of them be permitted to enter into it on a condition, that condition inures alike to all.

Notwithstanding the purity of motive and singleness of purpose which moved Virginia to become one of the United States, sectional interests were developed, and the seeds of faction, strife, and discord appeared in the very convention which adopted the Constitution. At that time African negroes were bought and sold and held in slavery in all the States. They had been brought here by the Crown, and forced upon Virginia when she was in the Colonial state, in spite of her oft-repeated petitions and remonstrances; and now since she—with others—were independent and masters of themselves, they desired to put an end forthwith to this traffic. To this the North objected, on the ground that her people were

\* Proceedings of the Va. Convention, 1788, page 28, Code of Va., 1869.

extensively engaged in kidnapping in Africa, and transporting slaves thence for sale to Southern planters. They had, it was added, such interests at stake in this business that twenty years would be required to wind it up. At that time the political balance between the sections was equal; and the South, to pacify the North, agreed that the new Government should have no power until after twenty years should have elapsed to restrict their traffic; and thus the North gained a lease and a right to fetch slaves from Africa into the South till 1808. That year, one of Virginia's own sons being President of the United States, an Act was passed forbidding a continuance of the traffic and declaring the further prosecution of it piracy.

Virginia was the leader in the war of the Revolution, and her sons were the master-spirits of it, both in the field and in the Cabinet. For an entire generation after the establishment of the Government under the Constitution, four of her sons—with an interregnum of only four years—were called, one after the other, to preside, each for a period of eight years, over the affairs of the young Republic, and to shape its policy. In the meantime Virginia gave to the new Government the whole of her North-West Territory, to be held by it in trust for the benefit of all the States alike. Under the wise rule of her illustrious sons in the Presidential chair, the Republic grew, and its citizens flourished and prospered as no people had ever done.

During this time the African slave-trade having ceased, the price of negroes rose in the South. Then the Northern people discovered that it would be better to sell their slaves to the South than to work them; whereupon acts of so-called emancipation were passed in the North. They were prospective, and were to come in force after the lapse generally of twenty \* years, which allowed the slave-holders among them ample time to fetch their negroes here and sell them to our people. This many of them did; and the North got rid of her slaves for value received, rather than through any real desire to set her bondmen free.

About this time also, Missouri—into which the early settlers had carried their slaves—applied for admission into the Union as a State. The North opposed it, on the grounds that slavery

\* Slavery did not cease in New York till 1827.

existed there. The South appealed to the Constitution, called for the Charter which created the Federal Government, and asked for the clause which gave Congress the power to interfere with the domestic institutions of any State, or with any of her affairs, further than to see that her organic law ensured a Republican form of government to her people. Nay, she appealed to the force of treaty obligations, and reminded the North that in the treaty with France for the acquisition of Louisiana, of which Missouri was a part, the public faith was pledged to protect the French settlers there, and their descendants, in their rights of property, which includes slaves. The public mind became excited; sectional feelings ran high; and in 1820-21 the Union was in danger of being broken up through Northern aggression and Congressional usurpations. To quiet the storm, a son of Virginia came forward as peacemaker, and carried through Congress a Bill that is known as the "Missouri Compromise." So the danger was averted. This Bill, however, was a concession, simple and pure, to the North on the part of the South, with no equivalent whatever, except the gratification of a patriotic desire to live in harmony with the sister States and preserve the Union. This compromise was to the effect that the Southern people should thereafter waive their right to go with their slaves into any part of the common territory north of 36° 30'. Thus was surrendered up to the North for settlement, at her own time and in her own way, more than four-fifths of the entire public domain, with equal rights with the South in the remainder.

That posterity may fairly appreciate the extent of this exaction by the North, and of the sacrifice made by the South to satisfy it, to maintain the public peace and preserve the Union, it is necessary to refer to a map of the country, and to remember that at that time neither Texas, New Mexico, California, nor Arizona belonged to the United States; that the country west of the Mississippi which fell under that compromise is that which was acquired from France in the purchase of Louisiana, and which includes West Minnesota, the whole of Iowa, Arkansas, The Indian Territory, Kansas, Nebraska, and Dakota, Montana, Wyoming, Colorado, Utah, Nevada, Idaho, Washington, and Oregon, embracing an area of 1,360,000 square miles. Of this the South had the privilege of settling Arkansas alone, or less than the one twenty-fifth part of the whole. The

sacrifice thus made by the South for the sake of the Union, will be more fully appreciated when we reflect, that under the Constitution Southern gentlemen had as much right, and the same right, to go into the territories with their slaves that men of the North had to carry with them there their apprentices and servants. Though this arrangement was so prejudicial to the South, though the Supreme Court decided it to be unconstitutional, null and void, the Southern people were still willing to stand by it; but the North would not. Backed by majorities in Congress, she only became more and more aggressive. Furthermore, the magnificent country given by Virginia to the Union came to be managed in the political interests of the North. It was used for the encouragement of European immigration into the free States; and such was the rush of settlers from abroad to the polar side of  $36^{\circ} 30'$ , and for the cheap and rich lands of the North-West Territory, that the population of the North was rapidly and vastly increased—so vastly, that when the war of 1861 commenced, the immigrants and the descendants of immigrants, which the two sections had received from the Old World since this grant was made, amounted to no less than 7,000,000 souls more for the North than for the South. This increase destroyed the balance of power between the sections, placed the South in Congress hopelessly in the minority, and gave the reins of the Government over into the hands of the Northern factions. Thus, the two hundred and seventy millions of acres of the finest land on the continent, which Virginia gave to the Government to hold in trust as a common fund, was so managed as to increase Northern votes and power. Nor was this all. Large grants of land, amounting to many millions of acres, were made from this domain to certain Northern States, for their railways and other works of internal improvement, for their schools and corporations; but not an acre to Virginia.

In consequence of the Berlin and Milan Decrees, and the Orders in Council, the embargo and the war with Great Britain which followed in 1812, the people of the whole country suffered greatly for the want of manufactured articles, many of which had become necessities of life. Moreover, it was at that time against the laws of England for any artisan or piece of machinery used in her workshops to be sent to this country. Under these circumstances it was thought wise to encourage



manufacturing in New England, until American labour could be educated for it and the requisite skill acquired for the establishment of workshops. The Southern statesmen took the lead in the passage of a tariff to encourage and protect the manufacturing industries of the North. But in course of time these restrictive laws in England were repealed, and it then became easier for New England to import than to educate labour and skill. Nevertheless the protection continued, and was so effectual that the manufacturers of New England began to compete in foreign markets with the manufacturers of Old England. Whereupon the South said, "Enough. The North has free trade with us; the Atlantic Ocean rolls between this country and Europe; the expense of freight and transportation across it, with moderate duties for revenue alone, ought to be protection enough for these Northern industries. Therefore, let us do away with tariffs for protection. They have not, by reason of geographical laws, turned a wheel in the South; moreover, they have proved a grievous burden to our people." Northern statesmen did not see the case in that light; but fairness, right, and the Constitution were on the side of the South. She pointed to the unfair distribution of the public lands, to the unequal dispensation among the States of the Government favour and patronage, and to the fact that the New England manufacturers had gained a firm footing and were flourishing; therefore, protection had accomplished its purpose. Moreover, peace, progress, and development had, since the end of the French wars, dictated Free Trade as the true policy of all nations. Our senators proceeded to demonstrate by example the hardships of submitting any longer to tariffs for protection. In their arguments they quoted examples to this effect:—The Northern farmer clips his hundred bales of wool, and the Southern planter picks his hundred bales of cotton. So far they are equal, for up to this stage the Government affords to each equal protection in person and property. But the Government would not stop here. It went further—re-protected the industry of one section and taxed that of the other; for though it suited the farmer's interest and convenience to put his wool into his own waggon and to send it to a New England mill to have it made into one hundred bales of cloth, it also suited in a like degree the Southern planter to put his cotton in his own ships, and to send it to Old England to have it made into one

hundred bales of calico. And now came the injustice and the grievance. They both, so the case was made to run, preferred the Charleston market; they both, the illustration assumed, arrived by sea and proceeded together, each with his invoices of one hundred bales, to the Custom House. There the Northern man is told that he may land his hundred bales duty free; but the Southern man is required to leave forty of his in the Custom House for the privilege of landing the remaining sixty.\* It was in vain for the Southerner to protest, or to urge, "You make us pay bounties to Northern fishermen under the plea that it is a nursery for seamen. Is not the fetching and carrying of Southern cotton across the sea in Southern ships as much a nursery for seamen as the catching of codfish in Yankee smacks? But instead of allowing a bounty for this, you exact taxes and require protection for my Northern fellow-citizens at the expense of Southern industry and enterprise." The complaints against the tariff were, at the end of ten or twelve years, followed by another compromise in the shape of a modified tariff, by which the South again gained nothing, and the North everything. The effect was simply to lessen, not to abolish, the tribute-money exacted for the benefit of Northern industries.

Fifteen years before the war, it was stated officially from the Treasury Department at Washington, that under the tariff then in force the self-sustaining industry of the country was taxed in this indirect way in the sum of \$80,000,000 annually, none of which went into the coffers of the Government, but all into the pocket of the protected manufacturer. The South, moreover, complained of the unequal distribution of the public expenditures; of unfairness in protecting, buoying, lighting, and surveying the coast. She laid her complaints on grounds like these: for every mile of sea-front in the North, there are four in the South. Yet there were four well-equipped dock-yards in the North to one in the South; large sums of money have been expended for Northern, small for Southern defences; navigation of the Southern coast was far more difficult and dangerous than that of the Northern; yet the latter was better lighted, and the Southern coast was not surveyed by the Government until it had first furnished Northern ship-owners with good charts for navigating their waters and entering their harbours.

\* The tariff at that time was about 40 per cent.

Thus dealt by, there was cumulative dissatisfaction in the Southern mind towards the Federal Government, and Southern men began to ask each other, "Should we not be better off out of the Union than we are in it?" Nay, the public discontent rose to such a pitch in consequence of the tariff that nullification was threatened, and the existence of the Union was again seriously imperiled. Dissolution might have ensued had not Virginia stepped in with her wise counsels. She poured oil upon the festering sores in the Southern mind, and did what she could in the interests of peace; but the wound could not be entirely healed: Northern archers had hit too deep.

The Washington Government was fast drifting towards centralization, and the result of all this Federal partiality, of this unequal protection and encouragement, was that New England and the North fattened upon the tribute forced from the South, and prospered as few people have ever done.

But our grievances had not yet culminated. Other difficulties sprung up in quick succession. By the Constitution, a citizen of the South had a right to pursue his fugitive slave into any of the States, apprehend and bring him back; but so unfriendly had the North become towards the South, and so regardless of her duties under the Constitution, that Southern citizens, in pursuing and attempting to apprehend runaway negroes in the North, were thrown into gaol, maltreated, and insulted in spite of their rights. Northern people loaded the mails for the South with inflammatory publications inciting the negroes to revolt, and encouraging them to rise up, use the midnight torch, and murder their owners. Like tampering with the negroes was one among the causes which led Virginia into her original proposition to the other Colonists—that they should all, for the common good and common safety, separate themselves from Great Britain and strike for independent existence; which they did. In a resolution unanimously adopted in convention for a declaration of such independence, it was urged that the King's representative in Virginia was "tempting our slaves by every artifice to resort to him, and training and employing them against their masters."\* To counteract the attempt by the New England people to do the like, the Legislatures of Virginia and other Southern States, felt themselves constrained to curtail

\* Resolution of Va. for a Declaration of Independence, unanimously adopted 15th May, 1776, page 1, Code of Va., 1860.

the privileges of the slave, to increase the patrols, and for the public safety to enact severe laws against the black man. This grated upon the generous feelings of our people the more, because they were thus compelled in self-defence to spread hateful laws upon the Statute-book of the State. It was a shaft that sank deep and rankled long; it brought to mind Colonial times, and put into Southern heads the idea of another separation. But this was not all. Societies were formed in the North to encourage our negroes to escape and to harbour the runaways; emissaries came down to inveigle them away; and while the evil-minded among them were engaged in this, the Northern States aided and abetted, by passing Acts prohibiting their officers to assist the Southern citizens in the capture of runaways, and hindering him from doing it himself. At length things came to such a pass, that no Southern gentleman, notwithstanding his right, dared, when he went to the North either on business or pleasure, to carry with him, as he formerly did, a body-servant. More harsh still—delicate mothers and invalids with their nurses, though driven from their Southern home, as they often are, by pestilence or plague, dared not seek refuge in the more bracing summer climates of the North; they were liable to be mobbed, to see their servants taken away by force, and, when that was done, they found that Northern laws afforded no protection. In short, our people had no longer equal rights in a common country.

Finally, the aggressive and fanatical spirit of the North came to such a pitch against us, that, just before the Southern people began to feel that patience and forbearance were both exhausted, a band of raiders, fitted out and equipped in the North, came down upon Virginia with sword and spear in hand. They commenced in the dead of night to murder our citizens, to arm the slaves, encouraging them to rise up, burn and riot, kill and slay through the land. The ringleader was caught, tried, and hung. Northern people regarded him as a martyr in a righteous cause. His body was carried to the North for ovation; they paid homage to his remains, sang pæans to his memory, and amidst jeers and taunts for Virginia, which to this day was reverberated through the halls of Congress, enrolled his name as one who deserved well of his country.

These acts were well calculated to keep the Southern mind in a highly feverish state and in an unfriendly mood; and there

were other influences at work to excite sectional feelings and beget just indignation among the Southern people. The North was commercial, the South agricultural. Through their fast-sailing packets and steamers Northern people were in constant communication with foreign nations; the South rarely except through the North, Northern men, and Northern societies. This gave the North the ear of Europe. She took advantage of this circumstance to our prejudice—defamed the South and abused the European mind with libels and slanders and evil reports against us. They represented Southern people as a lawless and violent set, where men and women were without shame; they asserted, with all the effrontery of impudent falsehood, that the chief occupation of the gentlemen of Virginia was the breeding of slaves like cattle for the shambles. To this day the whole South is suffering under this defamation of character; for it is well known that in consequence of this immigrants from Europe now refuse to come and settle in Virginia.

This long list of grievances does not end here. The population of the North had, by reason of the vast numbers of foreigners that had been induced to settle there, become so great that the balance of power in Congress was completely destroyed.

The Northern people became more tyrannical in their disposition, Congress more aggressive in its policy. In every branch of the Government the South was in a hopeless minority, and completely at the mercy of an unscrupulous majority for their rights in the Union. Emboldened by their popular majorities at the hustings, the master-spirits of the North now proclaimed the approach of an irrepressible conflict with the South, and their representative men in Congress preached the doctrine of a "higher law," confessing that the policy about to be pursued in relation to Southern affairs was dictated by a rule of conduct unknown to the Constitution, not contained in the Bible, but sanctioned, as they said, by some higher law than the Bible itself. Thus, finding ourselves at the mercy of faction and fanaticism, the Presidential election of 1860 drew nigh. The time for putting candidates in the field was at hand. The North brought out their candidate, and by their platform pledged him to acts of unfriendly legislation against us. The South warned the North and protested, the political leaders in some of the Southern States publicly declaring that if Mr. Lincoln,

their nominee, were elected, the States would not remain in the Union. He was truly a sectional candidate. He received no vote in the South, but was, under the provisions of the Constitution, duly elected nevertheless; for now the poll of the North was large enough to elect whom she pleased.

When the result of this election was announced, South Carolina and the Gulf States each proceeded to call a convention of her people; and they, in the exercise of their inalienable right to alter and abolish the common Government, and to institute a new one, resolved to withdraw from the Union—peaceably if they could. They felt themselves clear as to their right and thrice-armed; for they remembered that they were a Sovereign people, and called to mind those precious rights that had been solemnly proclaimed, and in which and for which we, and our fathers before us, had a most abiding faith, reverence, and belief. Prominent among them was, as we have seen, the right of each of these States to consult her own welfare and withdraw or remain in the Union in obedience to its dictates and the judgment of her own people. So they sent Commissioners to Washington to propose a settlement, the Confederate States offering to assume their quota of the debt of the United States, and asking for their share of the common property. This was refused.

In the meantime Virginia assembled her people in grand council too; but she had hitherto refused to come near the Confederate States in their councils. She had laid the cornerstone of the Union, her sons were its chief architects; and though she felt that she and her sister States had been wronged without cause, and had reason good and sufficient for withdrawing from a political association which no longer afforded domestic tranquillity, or promoted the general welfare, or answered its purposes, yet her love for the Union and the Constitution was strong, and the idea of putting down, without having first exhausted all her persuasives, and tried all means to save what had cost her so much, was intolerable. She thought the time for separation had not come, and waited first to try her own “mode and measure of redress.” She considered that it should not be such as the Confederate States had adopted. Moreover, by standing firm, she hoped to heal the breach, as she had done on several occasions before. She asked all the States to meet her in a Peace Congress. They did so; and the North being

largely in the majority, threw out Southern propositions and rejected all the efforts of Virginia at conciliation. North Carolina, Tennessee, Arkansas, all remained in the Union awaiting the action of our State, which urged the Washington Government not to attempt to coerce the seceded States, or force them with sword and bayonet back into the Union—a thing, she held, which the Charter which created the Government gave it no authority to do.

Regardless of these wise counsels, and of all her rightful powers, the North mustered an army to come against the South, whereupon, seeing the time had come, and claiming the right which she had especially reserved, not only for herself but for all the States, to withdraw from the Union, the grand old Commonwealth did not hesitate to use it. She prepared to meet the emergency. Her people had been already assembled in convention, and they, in the persons of their representatives, passed the "Ordinance of Secession," which separated her from the North and South and left her alone, again a free Sovereign and independent State, without a single entangling alliance. This done, she sounded the notes of warlike preparation. She called upon her sons who were in the service of the Washington Government to confess their allegiance to her, resign their places, and rally around her standard. The true men among them came. In a few days she had an army of 60,000 men in the field; but her policy was still peace—armed peace, not war. Assuming the attitude of defence, she said to the powers of the North, "Let no hostile foot cross my borders." Nevertheless, they came with fire and sword; battle was joined upon her own soil, victory crowned her banners then and afterwards on many a well-fought field; but she and her sister States, cut off from the outside world by the navy they had helped to establish for the common defence, battled together against fearful odds at home for four long years, but were at last overpowered by mere numbers; and then came disaster. Her sons who fell died in defence of their country, their homes, their rights, and all that makes native land dear to the hearts of men.

---

## APPENDIX D.

NOTICES OF MAURY'S DEATH—PROPOSED MEMORIAL TO HIS MEMORY—  
EXTRACTS FROM HIS WILL.

THE papers throughout the States, and the journals of almost all the countries of Europe, vied with each other in expressions of sympathy and respect for Maury's memory.

An "eye-witness" wrote as follows in the *Richmond Dispatch* of February 3rd, 1873 :—

"It was announced in all the churches in Lexington yesterday that the remains of Commander M. F. Maury would lie in state in the hall of the library of the Military Institute from three o'clock this afternoon till Wednesday, in order that all friends and admirers of this great and good man might be enabled to see his face once more. The gallery round the hall was festooned with black. A large anchor and a cross of evergreens were placed at alternate angles. The columns were draped spirally. The wall was covered with maps constructed under the supervision of the deceased. Inclining at an angle of 45 degrees, on opposite sides of the gallery, were placed two flags, the one of his native State, the other of his adopted State—Virginia and Tennessee—both heavily draped. Near the bier stood a large globe tastefully draped, and the inscription was striking in its appropriateness—'The whole world is mourning for Maury.' The bier was in the centre of the hall, and was covered with black broadcloth.

"At 4 P.M. the coffin was borne from the late residence of the deceased to the hall by twelve commissioned officers of the cadet battalion, in full-dress uniform, wearing sash and belt, followed by the Faculty of the Institute.

"The coffin having arrived at the hall, and the lid having been removed, a pall was thrown over the lower part of the body, the face and upper part remaining uncovered; then, at a motion from the officer in charge, the corporal placed his sentinel on the solemn beat alongside the bier.

"The body was dressed in a plain suit of black; on the breast had been carefully placed the various Orders that had been



conferred upon him by different crowned heads in Europe in recognition of his distinguished services in the cause of science. The corpse was the most beautiful and life-like I ever saw : a sweet and gentle smile rested upon the cold lips, and he looked at peace. After the corps of cadets had passed in and looked their last upon the face of their dead professor, and the crowd of mourners had gone, the hall was deserted by all save the lonely sentinel pacing his round."

"For three days the body lay in state in the library," says the *Norfolk Journal*, "and to-day, at ten minutes past one o'clock, the remains of Commander Maury, the great American meteorologist, were laid in their temporary resting-place in a vault in the cemetery at Lexington. Among the decorations on the breast of the dead Maury, were the 'Legion of Honour,' given by Napoleon III.; the Portuguese Order of the 'Tower and Sword,' given for 'valour, loyalty, and merit'; Order of 'St. Ann of Russia'; Order of the 'Dannebrog,' given by the King of Denmark; Order of our 'Lady of Guadeloupe,' given by the Emperor of Mexico, and placed upon him by the hands of the Empress Carlotta, and others."

A solemn funeral service was held in the hall by the Rev. Wm. Pendleton, D.D., of Grace Church, of which the deceased was a member. The coffin was placed in a hearse, drawn by four led horses, and taken to the vault, attended by the cadet battalion in full force and the Faculty of the Institute, professors and students of Washington and Lee University and citizens generally. The senior class of the Institute acted as pall-bearers.

The business houses were all closed, the bells of the churches and public buildings were tolled, and guns were fired at regular intervals from the camp. The vault is of native mountain-granite, and is immediately in front of the grave of "Stonewall Jackson."

The *New York Herald*, February 10th, 1873, published a letter from "A British Sailor," who proposed to show the appreciation and gratitude of seafaring men by raising a substantial subscription for the benefit of Commander Maury's family. In commenting on this the *New York Herald* says, "We need only add to this merited testimonial of Commander Maury's services and appeal for his family, that we shall be happy to receive any contributions for the noble object proposed."

The communication from "A British Sailor" was translated into French and published in the *Courier des États-Unis*, and in another French paper, and in many leading papers of the United States. When his widow was told of this she was deeply moved, and exclaimed to her children, as she burst into tears, "No, no! If your father has left me a little, that little shall be enough. Write at once to the papers and tell them I do not wish a subscription started there in my behalf"—which was done.

The following resolutions of respect and sympathy were passed by the General Assembly of Virginia, Monday, Feb. 3rd, 1873.

SENATE.

*Lieutenant-Governor J. L. Morye in the Chair.*

THE MEMORY OF COMMANDER M. F. MAURY.

The following preamble and joint resolutions were offered by Mr. Anderson, of Rockbridge, after the reading of the despatch to the Governor announcing the death of Commander Maury:—

"The intelligence of the death of Commander Matthew Fontaine Maury has been received by the General Assembly with heartfelt sorrow and profound regret.

"The learning and labours and genius which through a busy lifetime he consecrated to the highest uses of his country and mankind, and his self-sacrifice and devotion to the State, render it proper that Virginia should recognise at the grave the virtues of her illustrious son.

"In the general grief which pervades thousands of hearts in both hemispheres, we but give expression to the sentiment of all who knew him when we point to his noble, earnest, and unselfish life as a beautiful illustration of what the most ardent votary of science, animated by lofty Christian principle, may accomplish for humanity. But while Virginia admires the virtues and genius of her lamented son, there is no need that she should show them to the world. The world knows him already. His fame, like his usefulness, has been limited only by the confines of commerce and of civilisation, and history will perpetuate the recollection of his character and achievements. Virginia mourns his loss, and with the loved ones of his household grieves over the sad event which has ended his

labours on earth, and rejoices in the assurance that he has been borne from scenes of suffering here to the blessedness and peace of a happier and brighter world."

"Resolved (the House of Delegates concurring) that the foregoing paper be adopted by the General Assembly, and be spread upon the journals of the Senate and House of Delegates, and be communicated to the family of Commander Maury and to the Faculty of the Virginia Military Institute."

Mr. Anderson, of Rockbridge, in presenting the resolutions, made a fine eulogy upon the character, life, and services of the deceased. Mr. Wynne seconded the resolutions, and also eulogised Commander Maury, not only for his great scientific attainments, but as a Christian gentleman and as a Virginian who loved his native State with a warmth beyond comparison.

The resolutions were unanimously adopted and communicated to the House.

#### HOUSE OF DELEGATES.

##### *Speaker Hanger in the Chair.*

Senator Anderson, of Rockbridge, came with a message bearing the Senate resolutions on the death of Commander M. F. Maury.

After eulogies upon the character and abilities and services of the deceased *savant* and patriot, by Messrs. Progue, Gilmer, and Douglas, the resolutions were unanimously adopted, and on motion of Mr. Donald the House adjourned.

Remarks of Mr. Anderson, of Rockbridge, in the Senate, upon moving the adoption of resolutions in relation to the death of Commander Maury:—

"The melancholy intelligence which you have formally announced, Mr. President, will occasion deep sorrow wherever it is received.

"In the presence of this sad event, I can hardly trust myself to speak of the character and the history of the great man who has just been removed from the scenes of his earthly labours and usefulness.

"It was, sir, vouchsafed to no man of his generation to live to see so much good accomplished as the direct result of his own efforts and discoveries; and perhaps no man, living or dead,

has ever contributed more to the practical welfare of mankind. This is not strange, for he devoted his life to the advancement and improvement of his race, and, forgetting self, worked for the good of humanity.

"History will place his name and character in the same rank with Newton and Humboldt, for the field of his researches was no less extensive than theirs, and the benefits conferred upon the world have been as great.

"I doubt whether we yet fully realise the greatness of the work which he accomplished, and the fame which he achieved. His simple and unostentatious and laborious life was only rendered conspicuous by its results. His triumphs were the mastery of the laws of matter, and were bloodless and noiseless, but they were more beneficial, and not less glorious, than the victories of war.

"There is not a ship that moves on the ocean, there is not an article of commerce used by civilised men, which does not tell the story of his labours and his genius, and throughout civilisation, and especially throughout the maritime world, he is rightly regarded as one of the greatest benefactors.

"Others have perfected the systems which his genius originated, and have to a great extent reaped the fruits of his discoveries; but the world will, sooner or later, accord to him the debt of gratitude and the meed of praise which are his due. . . .

"The crowning honour of Commander Maury's life was that, a devotee to science, he was a faithful servant of the living God, and a fearless searcher after truth; he was an humble and earnest soldier and follower of Christ.

"He has been an honour to Virginia, an honour to America, and an honour to civilisation, and in gratefully recognising this we do but honour ourselves." \*

The road from Lexington to the then nearest railway-station passed through a beautiful gorge in the Blue Ridge Mountains known as the Goshen Pass. When the bereaved family were moving to their future home in Richmond, bearing the remains of their dead with them for interment at that place, this pass was decorated with flowers by loving unknown hands, in response to the touching request made before his death, "When you carry me through the Goshen Pass, let it be in the spring-

\* Extract from the *Richmond Whig* of Monday, January 26th, 1874.

time, and pluck the rhododendron and the laurel and shower them on my bier."

His body now lies in Holywood, between the last resting-places of Ex-Presidents Monroe and Tyler, on a lovely knoll overlooking the James River.

---

PROPOSED MEMORIAL TO COMMANDER MAURY.

The following is a copy of a communication transmitted to Governor Kemper :—

SIR,

Richmond, Va., Jan. 23rd, 1874.

The Superintendent of the Virginia Military Institute has received a communication from Commodore Jansen, of the Royal Netherland's Navy, proposing the construction of a light-house on the Rocos Banks as a memorial to the distinguished services rendered to mankind by the late Commander M. F. Maury, LL.D.

This proposition has received the endorsement of the Royal Geographical Society of Great Britain. We are permitted to submit the following extracts from letters on this subject :—

London, 21, Eccleston Square, S.W.,

MY DEAR JANSEN,

May 13th, 1873.

The President and Council of the Geographical Society have authorized me to tell you, that as soon as the proposal for the "Maury Memorial" takes regular shape, they will be glad to give the plan their cordial support. Sir Henry Rawlinson thinks that the plan should originate in America. Will you ask General Smith, as soon as the plan is well under way, to write officially to our Geographical Society and to the Societies on the Continent?

Yours sincerely,

CLEMENTS R. MARKHAM.

MY DEAR GENERAL,

Delft, Holland, May 15th, 1873.

From Markham's letter you will see that the Royal Geographical Society will give the "Maury Memorial," in the

shape of a lighthouse on the Rocos, their cordial and hearty assistance and support, if it is set on foot on your side.

Now can't you find in every State, among the leading men, admirers of Maury, to club together into a memorial committee by which the circular can be issued to the scientific societies all over the world inviting their co-operation, and asking the Emperor of Brazil's sanction to erect a lighthouse by private international subscriptions to the great hydrographer; and if the Emperor would like to accept it for maintenance and repair, and by so doing let his contribution take this shape, that the lighthouse shall be built by His Majesty out of the committee's funds, and be lighted and maintained out of the Brazilian exchequer?

Most truly yours,

JANSEN.

To General FRANCIS H. SMITH.

Maury, in his *Sailing Directions*, had called the attention of the United States Government to the importance of a lighthouse on the Rocos, as may be seen by the following extracts, Vol. 2, 8th Ed., 1859, p. 348:—

"The trans-equatorial trade of Europe, as well as that of America, is interested in the establishment of a lighthouse or beacon on the Rocos. Grass Island is ten feet or more—so says Lieutenant Lee—above the water, and the cocoanut would grow finely there. It is to be hoped that the request contained in the following letter will be complied with at an early day.

SIR,

Observatory, Washington, October 29th, 1858.

The new routes to the line have brought the Rocos of Brazil in 'the fair way' of all vessels bound thence to Rio, to California, India, China, Australia, or any of the ports beyond either of the two Great Southern Capes.

These shoals (the Rocos) were well surveyed by Lieutenant S. P. Lee, in the 'Dolphin,' in 1852, when she was sent, under the law of 1849, to assist in the investigations of this office. They are in lat. 3° 51' S., long. 33° 49' W. Two small islands, Grass and Sand Islands, are on these shoals. They are a few feet above the water. The first warning that a navigator has of his approach to them is generally by the breakers.

Captain Sam G. Brooks, of the bark 'Inman,' thinks that

cocoanut-trees would grow on them, and serve as an admirable beacon to ships that pass that way. Seeing that these shoals lie in such a great thoroughfare—for they are also in the track of all homeward-bound traders from South America and coasters from California—and considering the importance of the suggestion, I have to request that some of the vessels on the Coast of Brazil be directed to procure both the nut and the plant of the cocoanut-palm, and plant them on the Rocas as they pass that way.

The vessels of the Paraguay Expedition, as they return home, afford an excellent opportunity of carrying out the suggestion.

Respectfully, &c.,

M. F. MAURY,

*Superintendent.*

To Hon. ISAAC TONCEY,

Secretary of the Navy.

The above letters impart great interest to the 'Maury Memorial,' and with the encouraging prospect afforded by them of the hearty co-operation of foreign governments and societies in giving effect to the scheme, we are well assured that your Excellency will take pleasure in laying the subject before the general assembly for such moral support as may most fitly be given by the representations of a State which gave Maury to the world.

In behalf of the Board of Visitors of the Virginia Military Institute.

JOHN LETCHER,

*President of the Board.*

To His Excellency, JAMES L. KEMPER,  
Governor of Virginia."

The *Petersburg Index Appeal* thus wrote :—

" . . . Here is a signal and assuring instance of great labours faithfully done, in honour of which the world now raises its voice of emphatic acclaim and praise. The proposed erection of a lighthouse, to be named after Maury, is a fitting expression of the world's appreciation of his services, and reflects credit on the governments which have united in this tribute to the goodness and the greatness of the dead."

Virginia took no further steps in the matter, however, and

the whole scheme fell to the ground and was forgotten. Twelve years afterwards a leading Southern journal said :—

“The value of Maury’s services is incalculable, and that the Government has forgotten him gives all the more reason that the South should protect his memory and strive to perpetuate his fame.

“He was the greatest teacher that ever gave his talents to her service, and he gave up the surroundings and the work of his life to enter it. He has been dead now nearly twelve years, and yet no memorial marks his career and shows that of his stamp and kind are the men the South delights to honour.”

---

EXTRACTS FROM MAURY’S WILL. (S.) 1862.

By the grace and mercy of my blessed Lord and Saviour Jesus Christ, I, Matthew Fontaine Maury, being of sound mind and healthful body, do make this my last Will and Testament.

Should I fall in the war in which my country is now, in this month of February 1862, unhappily engaged, I wish no efforts to be made by my family to recover my body. A sailor’s or a soldier’s burial is all, in such a case, that I desire at the hands of men. But I pray the Lord to have mercy on my soul, beseeching my Redeemer from this day to the last to strengthen my hands to fight, and to deliver my feet from falling, that I may walk before God in the light of the living.

Should it please my Heavenly Father to let me die in the bosom of my family, then a pine coffin, a plain funeral, and a simple burial, with an evergreen to mark the spot, will constitute the burial, the tomb and the epitaph, that under the circumstances, are most grateful to me. But whether I die in peace, surrounded by family and friends, or whether I fall in battle, I hope my wife and children will not grieve because I am gone before, but that they will be comforted, and abstain from the outward signs of mourning.

After my death, I wish the expenses of my burial and all my debts to be paid. The remaining portion of my possessions,



save only the medals, I leave to my dear wife, who deserves *all* and more than I can give. I thank her for her example of piety and religion. I love her for her love and gentleness, and I honour myself by confessing to my children our obligations to her for all her goodness as wife and mother and friend.

My children, too, they have been dutiful, obedient and affectionate, giving me calm and comfort, for which I humbly thank them. Very precious are they to their Father's heart.

They will comfort and cherish their mother when I am gone, as they have done to both when I was living.

In token of my gratitude and affection and in memory

I leave to my daughter Betty, the Kosmos Medal of Humboldt, awarded to me at the instance of that illustrious philosopher, by the King of Prussia.

To my daughter Nannie I leave the "Great Prussian Gold Medal of Science."

To my son Richard, the Gold Medal which the King of Sweden and Norway caused to be struck in my honour.

To my son John, the Gold Medal which the King of Holland caused to be struck for me.

To my daughter Mary, the "Great Austrian Gold Medal of Science."

To my daughter Eliza, the Sardinian Gold Medal.

To my son Matthew, I bequeath the Gold Medal which the Senate of Bremen caused to be struck for me, and because he is to be a Latin scholar, I leave to him the set of thirteen Medals presented by His Holiness the Pope.

I leave to my daughter Lucy, the Gold Medal presented by the Emperor of the French and the diamond breast-pin presented by the Archduke Maximilian.

All these medals were presented in acknowledgment of the services rendered to commerce and navigation through the Wind and Current Charts and the researches connected therewith.

I leave to my grand-daughter, Nannie Bell, the Gold Medal of the French Exhibition.

I leave to my son-in-law, Wm. A. Maury, a copy of all my works and of the various editions of which there are duplicates.

To my son-in-law, Lieutenant S. W. Corbin, C. S. Navy, I leave the publications of the French Hydrographical Office,

which are bound in red, and were presented by the Minister of Marine.

To my friend and nephew, D. H. Maury, who has been as a son to me, I leave any article among my present effects that will be most grateful to him to have as a "keepsake." (A subsequent will designated the Medals presented to him by the Pope.)

I desire that my dear, kind, and faithful sister-in-law, Mary Herndon, shall continue to reside in my family as heretofore, so long as it may be agreeable.

To my sister-in-law, Mary Herndon, I bequeath my Hexapla Testament.

To my brother-in-law, John Herndon, I leave the walking-cane of tortoise-wood which his brother Lewis brought me from the Amazon.

To my brother-in-law, Brodie Herndon, the cane that I may use in my last walk upon earth. And to Charles, a pair of my best London razors.

To my sister Betsy and her daughter Diana I wish a ring or a breastpin of my hair presented.

Thanking all my good friends and affectionate relations for their many kindnesses, and lamenting my own unworthiness, I commend them to God's holy keeping, and my soul to His gentle mercies.

Given under my hand and seal in the city of Richmond, this 4th day of May, Anno Domini 1862.

M. T. MAURY.

Witness,

ROBERT H. MAURY, Jr.

R. H. MAURY.

May 1869.

*Extracts from Codicil to his last Will and Testament  
dated 4th May, 1862.*

The war has made of no effect several clauses of my last Will and Testament dated as aforesaid, in that my darling boy John—God rest his noble spirit!—is no more, and in that the books left in token of esteem and affection to my two well-beloved sons-in-law, William A. Maury and Spottswood Welford Corbin, have

been lost or mutilated, or otherwise rendered of no avail as such tokens.

In writing the school-books, I was greatly assisted by my three unmarried daughters—God bless them!—and especially by my precious Eliza; and also in the torpedo experiments by my companion and friend in exile, my affectionate son, Matthew Fontaine.

From these two sources my present means are mainly derived, and as these four much-loved children are not established, I wish my wife to bear that fact in mind, and while always helping according to her means that one of our children that may be most in want, I would fain, when claims are equal, she should remember how these four have, in the absence of the others, wrought with me.

Should any of these my three youngest daughters be unmarried at my dear wife's death, I desire especial provision to be made for such, so as to secure each one an annuity of not less than \$700 as long as she is single. With this reservation, I desire the rest of my estate, after the death of my wife and the payment of her debts, to be equally divided among our other children.

Let my Portuguese and my Danish Decorations be returned.

My dear brother, John Herndon, is no more. The London razors for Charles were lost in the war, and my walking-cane for Brodie has been worn out. It is in my heart to leave this dear friend and kinsman a more substantial memento than it is in my power to bestow. In brotherly affection and in gratitude for his friendship and his kindness, I leave him my gold spectacles, and hope that he will think of me sometimes, and, when he thinks, wear them.

I appoint my wife my executrix, and desire that she may qualify without security.